Manualslib.com - The Global Manuals Library

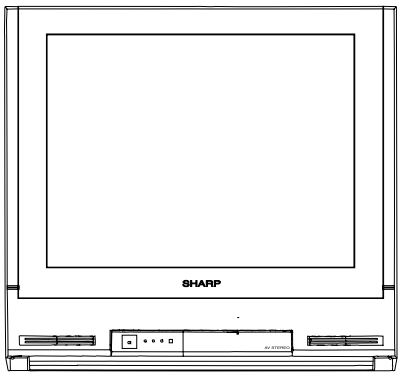
SHARP 25WF30 SERVICE MANUAL

Table of Contents

Table of Contents
service manual
colour television
sharp corporation
CHASSIS LAYOUT
BLOCK DIAGRAM
WAVEFORMS
DESCRIPTION OF SCHEMATIC DIAGRAM
SCHEMATIC DIAGRAMË CRT UNIT
PRINTED WIRING BOARD ASSEMBLIES
side view
SOLID STATE DEVICE BASE DIAGRAM
PRINTED WIRING BOARD ASSEMBLIES
SUPPLIED ACCESSORIES
MISCELLANEOUS PARTS
PACKING PARTS
cabinet parts
cabinet parts location
PACKING OF THE SET
Other ManualsLib Projects

SHARP SERVICE MANUAL

S21Q425WF30//



COLOUR TELEVISION

Chassis No. NFC

MODEL 25WF30

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

FEATURES

- 100 CH Program Memory
- AV Mode (Standard/ Dynamic/ Soft)
- CATV Hyper Band Ready
- Colour Comb Filter (NTSC)
- ON/OFF Velocity Modulation
- Black Stretch Circuit
- Picture Noise Reduction
- White Temp. Select
- Aperture Control
- Bass+
- Multi Language (English/Thai)
- Mono / Bilingual Select
- ON/OFF Reminder Timer
- Power Save Mode
- Rear AV-In 1 & 2, S-Video In, AV Output (Monitor Out), Headphone and Front AV-In 3
- Component Intput Terminal

CONTENTS

Page

- SPECIFICATIONS 2
- IMPORTANT SERVICE NOTES 2
- ADJUSTMENT PRECAUTIONS 3
- TROUBLE SHOOTING TABLE 13
- CHASSIS LAYOUT 18
- BLOCK DIAGRAM 19
- WAVEFORMS 27
- DESCRIPTION OF SCHEMATIC DIAGRAM .. 28
- SCHEMATIC DIAGRAM
  - CRT UNIT 29
  - MAIN UNIT 30
  - POWER UNIT 34
  - OPERATION UNIT 36
- PRINTED WIRING BOARD ASSEMBLIES 37
- SOLID STATE DEVICE BASE DIAGRAM 45
- REPLACEMENT PARTS LIST
  - ELECTRICAL PARTS 46
  - SUPPLIED ACCESSORIES 54
  - MISCELLANEOUS PARTS 54
  - PACKING PARTS 54
  - CABINET PARTS 55
- PACKING OF THE SET 56

WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis. To prevent electric shock, do not remove cover. No user – serviceable parts inside. Refer servicing to qualified service personnel.

SHARP CORPORATION

SPECIFICATIONS

Convergence	Self Convergence System
Focus	Bi-Potential, Uni-Potential Electrostatic
Sweep Deflection	Magnetic
Intermediate Frequency	
Picture IF Carrier	38.9 MHz
Sound IF Carrier	
5.5 MHz	33.16 / 33.4 MHz
Colour Sub-Carrier	
PAL	34.47 MHz
NTSC	35.32 MHz
Power Input	AC 110 - 240V, 50/60 Hz
Power Consumption	158 W
Audio Power Output Rating	10W × 2 (Max)
Speaker	
Size	6 × 12 cm × 2 pcs.
Aerial Input Impedance	75 ohm Unbalanced
Receiving Channels	
PAL-B/G	
VHF	E2 thru E12
UHF	E21 thru E69
CATV	X thru Z + 2, S1 thru S41
Receiving Frequency	
VHF	44.25 MHz thru 423.25 MHz
UHF	431.25 MHz thru 863.25 MHz
Dimensions	Width: 622 mm Height : 586.5 mm Depth : 484 mm
	Weight (Approx): 37 kg

Specifications are subject to change without prior notice.

IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be done by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10k ohm Resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)

1. **Picture tube in this receiver employs integral implosion protection.**
2. **Replace with tube of the same type number for continued safety.**
3. **Do not lift picture tube by the neck.**
4. **Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely**

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:

1. **When repairing the circuit, be sure not to increase the high voltage to more than 33.0 kV (at beam 0 μA) for the set.**
2. **To keep the set in a normal operation, be sure to make it function on 29.0 ±1.5 kV (at beam 1,600 μA) in the case of the set. The set has been factory – Adjusted to the above-mentioned high voltage.**
   ∴ If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.
3. **Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.**

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety checks.

1. **Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.**
2. **Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators and etc.**

ADJUSTMENT PRECAUTIONS

This model's setting are adjusted in two different ways: though the I²C bus control and in the conventional analog manner. The adjustments via the I²C bus control include preset-only items and variable data.

1. Setting the service mode by the microprocessor.

① Make a short-circuit JA373 and JA374, enter into the service mode. (Adjustment through the I2C bus control). (Use JWS Key to set as well).
② Press the CH DOWN / UP key on the remote controller to get ready to select the mode one by one.
③ Press the CH DOWN / UP key on the remote controller to select the modes reversibly one by one.
④ Using the VOLUME UP/ DOWN key on the remote controller, the data can be modified.
⑤ When the short circuit between JA373 and JA374 is cut off, it will be released from the service mode.

2. Factory Presetting.

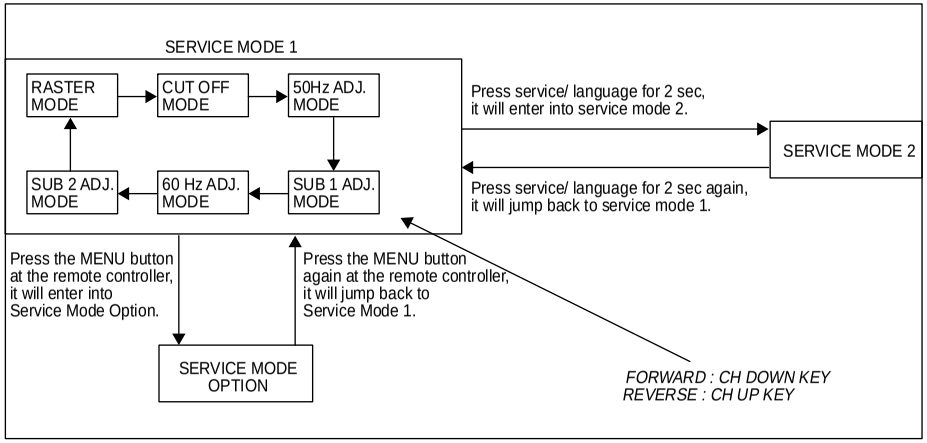
① Make a short-circuit JA373 and JA374 and turn on the main power switch. Initial values are automatically preset, only when a new EEPROM is used (Judge with the first 4 bytes).
② The initial data are preset as listed in page.
③ Make sure the data need modify or not (Initial data).

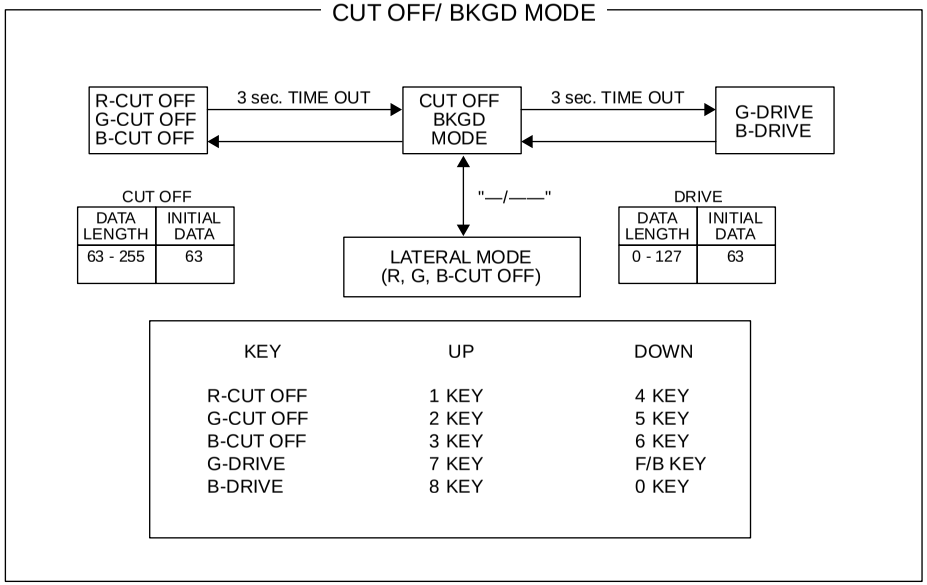
Note: Once the chassis has been assembly together and ready to be POWER ON for the FIRST TIME, make sure to make a short-circuit JA373 and JA374 to switch to the service mode position first and then turn on the main power switch. (See 2-1 above).

Precaution: If haven't done this initiation, it may possibly generate excessive Beam current.

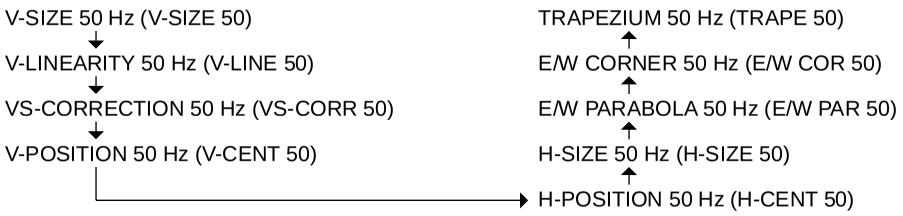
SERVICE MODE

1.) In the Service Mode, Key is used to select the mode in the following order.


SERVICE MODE 1
RASTER MODE
CUT OFF MODE
50Hz ADJ. MODE
SUB 2 ADJ. MODE
60 Hz ADJ. MODE
SUB 1 ADJ. MODE
Press service/ language for 2 sec, it will enter into service mode 2.
SERVICE MODE 2
Press service/ language for 2 sec again, it will jump back to service mode 1.
Press the MENU button at the remote controller, it will enter into Service Mode Option.
Press the MENU button again at the remote controller, it will jump back to Service Mode 1.
SERVICE MODE OPTION
FORWARD : CH DOWN KEY
REVERSE : CH UP KEY



50 Hz ADJ. MODE


V-SIZE 50 Hz (V-SIZE 50)
V-LINEARITY 50 Hz (V-LINE 50)
VS-CORRECTION 50 Hz (VS-CORR 50)
V-POSITION 50 Hz (V-CENT 50)
H-POSITION 50 Hz (H-CENT 50)
H-SIZE 50 Hz (H-SIZE 50)
E/W PARABOLA 50 Hz (E/W PAR 50)
E/W CORNER 50 Hz (E/W COR 50)
TRAPEZIUM 50 Hz (TRAPE 50)

60 Hz ADJ. MODE

V-SIZE 60 Hz (V-SIZE 60)
V-LINEARITY 60 Hz (V-LINE 60)
VS-CORRECTION 60 Hz (VS-CORR 60)
V-POSITION 60 Hz (V-CENT 60)
H-POSITION 60 Hz (H-CENT 60)
H-SIZE 60 Hz (H-SIZE 60)
E/W PARABOLA 60 Hz (E/W PAR 60)
E/W CORNER 60 Hz (E/W COR 60)
TRAPEZIUM 60 Hz (TRAPE 60)

SUB 1

SECAM R-Y	(SCM R-Y)
SECAM B-Y	(SCM B-Y)
BRIGHT	(SUB BRI)
BRIGHT (DVD)	(SUB BRI DVD)
SUB CONT	(SUB CONT)
SUB CONT (DVD)	(SUB CONT DVD)
SUB TINT	(SUB TINT)
SUB TINT (DVD)	(SUB TINT DVD)

FORWARD : CH DOWN KEY
REVERSE : CH UP KEY

SUB 2

SUB COLOR	(SUB COLOR)
SUB COLOR (DVD)	(SUB COLOR DVD)
V-ENT	(V-ENT)
H-ENT	(H-ENT)
RF AGC	(RF AGC)
SECAM BELL	(SCM BELL)
SPRIT/INTER	(S/I)
RF SUB SOUND	(RF S-SOUND)
HEAD PHONE SUB VOLUME ADJ.	(HP SUB VOL)
COLOR TEMP.	(WT)
PIFVCO	(PIFVCO)
LNA	(LNA)
SIF574	(SIF574)
AFC	(AFC)

SERVICE MODE

User Data in Service Mode Option

- While SERVICE MODE 1 on, EEPROM DATA will switch to the service data. Also, once press the menu button at the remote controller, EEPROM will switch to SERVICE MODE OPTION.
  Once press the menu button again at the remote controller, EEPROM will switch back to SERVICE MODE 1.
- In the service option the user data establish as below,

Service Mode Option

No.	EEPROM ITEM	DATA LENGTH	OSD	IC	DATA SETTING	INITIAL DATA
1	COMB OPTION	ON/OFF	COMB OP	OPTION		OFF
2	DVD OPTION	ON/OFF	DVD OP	OPTION		OFF
3	PAL OPTION	ON/OFF	PAL OP	OPTION		ON
4	6.5 M SIF FIX	0 ~ 1	6.5 M	1 CHIP	6.5 M SIF FIX (1)	0
5	ROTATION OPTION	ON/OFF	ROTA OP	OPTION		OFF
6	SYAKIT OPTION	ON/OFF	SYAKIT OP	OPTION		OFF
7	SPATIALIZER OPTION	ON/OFF	SPA OP	OPTION		OFF
8	FLAT OPTION	ON/OFF	FLAT OP	OPTION	(ON:FL)	OFF
9	SPEAKER	1 ~ 3	SPEAKER	OPTION	SP1 (1)	1
10	HOTEL ON/OFF	ON/OFF	H MODE	OPTION		OFF
11	HOTEL POSITION	0 ~ 99	H POSITION	OPTION		0
12	HOTEL VOLUME	0 ~ 60	H VOLUME	OPTION		0
13	LANGUAGE OPTION	1 ~ 2	LANG	OPTION		2
14	MONO BILINGUAL	ON/OFF	MO/BIL	OPTION		OFF

No.	EEPROM ITEM	DATA
1	COMB	ON
2	DVD	ON
3	PAL	ON
4	6.5 M	1
5	ROTA	OFF
6	SYAKIT	OFF
7	SPA	OFF
8	FLAT	ON
9	SPEAKER	1
10	H MODE	OFF
11	H POS	0
12	H VO	0
13	LANG	2
14	MO / BIL	ON

After short JA373 & JA374, and turn on the main power switch, read data from EEPROM Address 00H ~ 03H, and compare to the list below, if different, initialize the EEPROM.

Address	Data	Address	Data
00H	23H	02H	18H
01H	23H	03H	A3H

1. SERVICE MODE 1

No.	EEPROM SETTING	DATA LENGTH	OSD	IC	DATA SETTING	INITIAL DATA	EEPROM
0	MICOM INFO. DISPLAY		SERVICE MODE				
1	CUT OFF	REFER #	CUTOFF BKGD				
2	CUT OFF (DVD)	REFER #	CUTOFFBKGD (DVD)				
3	V-SIZE	0 ~ 63	V-SIZE 50	1 CHIP	V-SIZE	30	
4	V-LINEARITY (50Hz) #2	0 ~ 15	V S-LINE 50	1 CHIP	V-LINEARITY	10	
5	VS-CORRECTION (50Hz) #2	0 ~ 15	V S-CORR 50	1 CHIP	V S-CORRECTION	8	
6	V-POSITION #2	0 ~ 7	V-CENT 50	1 CHIP	V-PHASE	5	
7	H-POSITION #2	0 ~ 31	H-CENT 50	1 CHIP	H-PHASE	11	
8	H-SIZE (50Hz) #2	0 ~ 63	H-SIZE 50	1 CHIP	H-SIZE	32	
9	E/W-PARABOLA (50Hz) #2	0 ~ 63	E/W PAR 50	1 CHIP	E/W PARABORA	39	
10	E/W CORNER (50Hz) #2	0 ~ 15	E/W COR 50	1 CHIP	E/W CORNER	6	
11	TRAPEZIUM (50Hz) #2	0 ~ 31	TRAPE 50	1 CHIP	TRAPEZIUM	17	
12	SECAM R-Y #3	0 ~ 15	SCM R-Y	1 CHIP	SR-Y	8	
13	SECAM B-Y #3	0 ~ 15	SCM B-Y	1 CHIP	SB-Y	8	
14	BRIGHT	0 ~ 127	SUB BRI	1 CHIP	BRIGHTNESS	80	
15	BRIGHT (DVD)	0 ~ 127	SUB BRI DVD	1 CHIP	BRIGHTNESS	80	
16	SUB CONT	0 ~ 15	SUB CONT	1 CHIP	SUB CONT	3	
17	SUB CONT (DVD)	0 ~ 15	SUB CONT DVD	1 CHIP	SUB CONT	3	
18	TINT	0 ~ 127	SUB TINT	1 CHIP	TINT	64	
19	TINT (DVD)	0 ~ 127	SUB TINT DVD	1 CHIP	TINT	16	
20	V-SIZE	0 ~ 63	V-SIZE 60	1 CHIP	V-SIZE	39	
21	V-LINEARITY	0 ~ 15	V-LINE 60	1 CHIP	V-LINEARITY	10	
22	VS-CORRECTION (60Hz)	0 ~ 15	V S-CORR 60	1 CHIP	V S-CORRECTION	9	
23	V-POSITION (60Hz)	0 ~ 7	V-CENT 60	1 CHIP	V-PHASE	2	
24	H-POSITION (60Hz)	0 ~ 31	H-CENT 60	1 CHIP	H-PHASE	14	
25	H-SIZE (60Hz)	0 ~ 63	H-SIZE 60	1 CHIP	H-SIZE	34	
26	E/W PARABOLA (60Hz)	0 ~ 63	E/W PAR 60	1 CHIP	E/W PARABORA	19	
27	E/W CORNER (60Hz)	0 ~ 15	E/W COT 60	1 CHIP	E/W CORNER	4	
28	TRAPEZIUM (60Hz)	0 ~ 31	TRAPE 60	1 CHIP	TRAPEZIUM	6	
29	COLOUR	0 ~ 127	SUB COL	1 CHIP	COLOUR	60	
30	COLOUR (DVD)	0 ~ 127	SUB COL DVD	1 CHIP	COLOUR	60	45
31	V-ENT	0 ~ 7	V-ENT	1 CHIP	V-ENT	6	
32	H-ENT	0 ~ 7	H-ENT	1 CHIP	H-ENT	4	
33	RF AGC	0 ~ 63	RF AGC	1 CHIP	RF AGC	46	
34	SECAM BELL	0 ~ 1	SCM BELL	1 CHIP	S BELL	0	
35	SPRIT/INTER	0 ~ 1	S/I	1 CHIP	SPRIT/INTER	0	
36	RF SUB SOUND	0 ~ 127	RF S-SOUND	1 CHIP	RF SUB SOUND	96	
37	SUB VOLUME	0 ~ 63	SUB VOL	SOR/SPA	VOLUME	45	
38	H. PHONE SUB VOL. ADJ.	0 ~ 63	HP SUB VOL	SOR/SPA	VOLUME	63	
39	COLOUR TEMP.	0 ~ 1	WT	OPTION		1	
40	PIF VCO	#4	PIFVCO			-	
41	LNA	ON/OFF	LNA	OPTION		OFF	
42	SIF574	ON/OFF	SIF574	1 CHIP	SIF574	OFF	ON
43	AFC		AFC			OFF	

#1 Whiles selecting SERVICE MODE 1, MICOM Version Information, SOFTWARE Version Information, check some iformation will be displayed.
#2 60 Hz Adjustment Value is programmed from ± 50 Hz Adjustment value (± will be informed later)
#3 While adjusting SECAM R-Y, SECAM B-Y and **S BLACK** of 1 chip is set to 1.
#4 While choosing PIFVCO MODE and **RF AGC** set to "0 0" and **PIFVCO** is set to "1".

2. SERVICE MODE 2

NO.	EEPROM ITEM	DATA LENGTH	OSD	IC	DATA SETTING	INITIAL DATA	EEPROM
1	WPS	0 ~ 1	WPS	1 CHIP	WPS	1	
2	SUB CONTRAST	0 ~ 127	S CONT	1 CHIP	CONTRAST	127	
3	NTSC PHASE (NT)	0 ~ 3	N-PNT	1 CHIP	NTSC PHASE	0	
4	NTSC PHASE (PAL/SEC.)	0 ~ 3	N-P PS	1 CHIP	NTSC PHASE	0	
5	NTSC PHASE (DVD)	0 ~ 3	N-PD	1 CHIP	NTSC PHASE	3	
6	SUB SHARPNESS (TV)	0 ~ 63	S SHARP T	1 CHIP	SHARPNESS	10	12
7	SUB SHARPNESS (AV)	0 ~ 63	S SHARP A	1 CHIP	SHARPNESS	10	20
8	SUB SHARPNESS (DVD)	0 ~ 63	S SHARP D	1 CHIP	SHARPNESS	10	20
9	RGB MUTE	0 ~ 1	RGB MUTE	1 CHIP	RGB MUTE	OFF	
10	RGB CONTRAST	0 ~ 63	RGB CONT	1 CHIP	RGB CONTRAST	32	
11	Y-DL (NTSC-M)	0 ~ 3	YNM	1 CHIP	Y-DL	1	
12	Y-DL (PAL-B/G)	0 ~ 3	YPB	1 CHIP	Y-DL	1	
13	Y-DL (PAL-I)	0 ~ 3	YPI	1 CHIP	Y-DL	3	
14	Y-DL (PAL-D/K)	0 ~ 3	YPD	1 CHIP	Y-DL	3	
15	Y-DL (SECAM-B/G)	0 ~ 3	YSB	1 CHIP	Y-DL	0	
16	Y-DL (SECAM-D/K)	0 ~ 3	YSD	1 CHIP	Y-DL	3	
17	Y-DL (B/W)	0 ~ 3	YBW	1 CHIP	Y-DL	0	
18	Y-DL (NTSC-AV)	0 ~ 3	YNA	1 CHIP	Y-DL	0	
19	Y-DL (PAL-AV)	0 ~ 3	YPA	1 CHIP	Y-DL	0	
20	Y-DL (SECAM-AV)	0 ~ 3	YSA	1 CHIP	Y-DL	0	
21	Y-DL (B/W-AV)	0 ~ 3	YBA	1 CHIP	Y-DL	0	
22	SUB COLOUR	0 ~ 31	SUB COL	1 CHIP	SUB-COLOUR	16	
23	VSM GAIN AVM1	0 ~ 7	V-GAIN 1	1 CHIP	VSM GAIN	3	
24	VSM GAIN AVM2	0 ~ 7	V-GAIN 2	1 CHIP	VSM GAIN	5	
25	VSM GAIN AVM3	0 ~ 7	V-GAIN 3	1 CHIP	VSM GAIN	7	
26	BASE BAND TINT	0 ~ 31	B-B TINT	1 CHIP	BASE BAND TINT		
27	SECAM GP-PHASE	0 ~ 3	S G-PHASE	1 CHIP	S SP-PHASE	1	
28	SECAM ID-SENS	0 ~ 1	S ID-SENS	1 CHIP	S ID-SENS	0	
29	SECAM ID-MODE	0 ~ 1	S ID-MODE	1 CHIP	S ID-MODE	0	
30	PIF FREQ	0 ~ 7	P FREQ	1 CHIP	PIF FREQ	3	
31	P/N-ID	0 ~ 1	PN ID	1 CHIP	P/N-ID	0	
32	YS/YM MODE	0 ~ 1	YSM MODE	1 CHIP	YSM MODE	1	
33	RGB ABCL	0 ~ 1	RGB ABCL	1 CHIP	RGB ABCL	1	
34	DC RESTORATION	0 ~ 3	DC REST	1 CHIP	DC RESTORATION	3	
35	BLACK STRETCH	0 ~ 3	B ST	1 CHIP	BLACK STRETCH	1	
36	ABL START POINT	0 ~ 3	ABL ST	1 CHIP	ABL START POINT	3	
37	ABL GAIN	0 ~ 3	ABL GA	1 CHIP	ABL GAIN	2	
38	AKB MODE	0 ~ 63	AKB MODE	1 CHIP	AKB MODE	0	
39	COLOUR	0 ~ 1	COL G	1 CHIP	COLOUR	1	
40	V AGC	0 ~ 1	V AGC	1 CHIP	V AGC	0	
41	V RAMP REF	0 ~ 1	V RAMP	1 CHIP	V RAMP	1	
42	VSM PHASE	0 ~ 1	VSM PHASE	1 CHIP	VSM PHASE	0	
43	BASS LEVEL ON	0 ~ 3	BA LV	SUR/SPA	BASS LEVEL	0	
44	BASS OFF AVM1 SP1	0 ~ 4 #1	BA OFF 1 SP1	SUR/SPA	BASS SW, LEVEL	4	
45	BASS OFF AVM2 SP1	0 ~ 4 #1	BA OFF 2 SP1	SUR/SPA	BASS SW, LEVEL	4	
46	BASS OFF AVM3 SP1	0 ~ 4 #1	BA OFF 3 SP1	SUR/SPA	BASS SW, LEVEL	4	
47	BASS OFF AVM1 SP2	0 ~ 4 #1	BA OFF 1 SP2	SUR/SPA	BASS SW, LEVEL	4	
48	BASS OFF AVM2 SP2	0 ~ 4 #1	BA OFF 2 SP2	SUR/SPA	BASS SW, LEVEL	4	
49	BASS OFF AVM3 SP2	0 ~ 4 #1	BA OFF 3 SP2	SUR/SPA	BASS SW, LEVEL	4	
50	BASS OFF AVM1 SP3	0 ~ 4 #1	BA OFF 1 SP3	SUR/SPA	BASS SW, LEVEL	4	
51	BASS OFF AVM2 SP3	0 ~ 4 #1	BA OFF 2 SP3	SUR/SPA	BASS SW, LEVEL	4	
52	BASS OFF AVM3 SP3	0 ~ 4 #1	BA OFF 3 SP3	SUR/SPA	BASS SW, LEVEL	4	
53	BASS OFF AVM1 SP4	0 ~ 4 #1	BA OFF 1 SP4	SUR/SPA	BASS SW, LEVEL	4	
54	BASS OFF AVM2 SP4	0 ~ 4 #1	BA OFF 2 SP4	SUR/SPA	BASS SW, LEVEL	4	

NO.	EEPROM ITEM	DATA LENGTH	OSD	IC	DATA SETTING	INITIAL DATA	EEPROM
55	BASS OFF AVM3 SP4	0 ~ 4 #1	BA OFF 3 SP4	SUR/SPA	BASS SW, LEVEL	4	
56	AGC SW	0 ~ 1	AGC SW	SUR/SPA	AGC SW	ON	
57	AGC ADJ	0 ~ 3	AGC AD	SUR/SPA	AGC ADJ	3	2
58	FM LEVEL	#2	FM L	NICAM	FM LEVEL	+1	
59	IGR LEVEL	#2	IGR L	NICAM	IGR LEVEL	+2	
60	NICAM B/G LEVEL	#3	BG L	NICAM	NICAM B/G LEVEL	-1	
61	NICAM 1 LEVEL	#3	I L	NICAM	NICAM I LEVEL	+4	
62	NICAL D/K LEVEL	#3	DK L	NICAM	NICAM D/K LEVEL	-1	
63	LOWER ERROR	0 ~ 255	L ERR	NICAM	LOWER ERROR	35	
64	UPPER ERROR	0 ~ 255	U ERR	NICAM	UPPER ERROR	70	
65	IGR GAIN (9873H)	#4	IGR G	NICAM	IGR GAIN (9873H)	0	
66	NICAM SPEED	0 ~ 3	N SPEED	NICAM	N SPEED	2	
67	INTER/EXTER	0 ~ 1	IN/EX	NICAM	INTER/EXTER	0	
68	AUTO MUTE	0 ~ 1	AM	NICAM	AUTO MUTE	OFF	ON
69	AGC SW ON/OFF	0 ~ 1	AGC SW	NICAM	AGC SW	OFF	
70	AGC GAIN	0 ~ 31	AGC G	NICAM	AGC GAIN	16	
71	SYAKIT VOLUME 1	0 ~ 21	SVOL 1	SYAKIT	SVOLUME 1	0	
72	SYAKIT VOLUME 2	0 ~ 3	SVOL 2	SYAKIT	SVOLUME 2	0	
73	SYAKIT LOU	0 ~ 1	SLOU	SYAKIT	SLOU	1	
74	SYAKIT ATT	0 ~ 7	SATT	SYAKIT	SATT OUT	0	
75	SYAKIT BASS	0 ~ 13	SBASS	SYAKIT	S-BASS	6	
76	SYAKIT TREBLE	0 ~ 13	STRE	SYAKIT	S-TREBLE	6	
77	MAX LEVEL SYAKIT 1	0 ~ 5	S1MA			3	
78	MAX LEVEL SYAKIT 2	0 ~ 5	S2MA			4	
79	MAX LEVEL SYAKIT 3	0 ~ 5	S3MA			6	
80	START LEVEL SYAKIT 1	0 ~ 63	S1ST			17	
81	START LEVEL SYAKIT 2	0 ~ 63	S2ST			21	
82	START LEVEL SYAKIT 3	0 ~ 63	S3ST			20	
83	WIDE LEVEL SYAKIT 1	0 ~ 7	S1W1			6	
84	WIDE LEVEL SYAKIT 2	0 ~ 7	S2W1			3	
85	WIDE LEVEL SYAKIT 3	0 ~ 7	S3W1			3	
86	STOP LEVEL SYAKIT 1	0 ~ 5	S1SP			1	
87	STOP LEVEL SYAKIT 2	0 ~ 5	S2SP			1	
88	STOP LEVEL SYAKIT 3	0 ~ 5	S3SP			1	
89	BASS MAX SYAKIT 1	0 ~ 15	SBASS1			12	
90	BASS MAX SYAKIT 2	0 ~ 15	SBASS2			11	
91	BASS MAX SYAKIT 3	0 ~ 15	SBASS3			10	
92	TREBLE MAX SYAKIT 1	0 ~ 15	STRE1			12	
93	TREBLE MAX SYAKIT 2	0 ~ 15	STRE2			11	
94	TREBLE MAX SYAKIT 3	0 ~ 15	STRE3			10	
95	BASS AVM1 SP1	#6	BASS 1 SP1			-5	
96	BASS AVM2 SP1	#6	BASS 2 SP1			+2	
97	BASS AVM3 SP1	#6	BASS 3 SP1			+5	
98	BASS AVM1 SP2	#6	BASS 1 SP2			-5	
99	BASS AVM2 SP2	#6	BASS 2 SP2			0	
100	BASS AVM3 SP2	#6	BASS 3 SP2			+5	
101	BASS AVM1 SP3	#6	BASS 1 SP3			-5	
102	BASS AVM2 SP3	#6	BASS 2 SP3			0	
103	BASS AVM3 SP3	#6	BASS 3 SP3			+10	
104	BASS AVM1 SP4	#6	BASS 1 SP4			-5	
105	BASS AVM2 SP4	#6	BASS 2 SP4			-2	
106	BASS AVM3 SP4	#6	BASS 3 SP4			+6	
107	TREBLE AVM1 SP1	#6	TRE 1 SP1			-5	
108	TREBLE AVM2 SP1	#6	TRE 2 SP1			0	
109	TREBLE AVM3 SP1	#6	TRE 3 SP1			+5	
110	TREBLE AVM1 SP2	#6	TRE 1 SP2			-5	

NO.	EEPROM ITEM	DATA LENGTH	OSD	IC	DATA SETTING	INITIAL DATA	EEPROM
111	TREBLE AVM2 SP2	#6	TRE 2 SP2			+2	
112	TREBLE AVM3 SP2	#6	TRE 3 SP2			+8	
113	TREBLE AVM1 SP3	#6	TRE 1 SP3			-10	
114	TREBLE AVM2 SP3	#6	TRE 2 SP3			0	
115	TREBLE AVM3 SP3	#6	TRE 3 SP3			+5	
116	TREBLE AVM1 SP4	#6	TRE 1 SP4			-10	
117	TREBLE AVM2 SP4	#6	TRE 2 SP4			+2	
118	TREBLE AVM3 SP4	#6	TRE 3 SP4			+6	
119	BASS MODE AVM1 SP1	ON/OFF #7	BA MO 1 SP1			OFF	
120	BASS MODE AVM2 SP1	ON/OFF #7	BA MO 2 SP1			OFF	
121	BASS MODE AVM3 SP1	ON/OFF #7	BA MO 3 SP1			ON	
122	BASS MODE AVM1 SP2	ON/OFF #7	BA MO 1 SP2			OFF	
123	BASS MODE AVM2 SP2	ON/OFF #7	BA MO 2 SP2			OFF	
124	BASS MODE AVM3 SP2	ON/OFF #7	BA MO 3 SP2			ON	
125	BASS MODE AVM1 SP3	ON/OFF #7	BA MO 1 SP3			OFF	
126	BASS MODE AVM2 SP3	ON/OFF #7	BA MO 2 SP3			OFF	
127	BASS MODE AVM3 SP3	ON/OFF #7	BA MO 3 SP3			ON	
128	BASS MODE AVM1 SP4	ON/OFF #7	BA MO 1 SP4			OFF	
129	BASS MODE AVM2 SP4	ON/OFF #7	BA MO 2 SP4			OFF	
130	BASS MODE AVM3 SP4	ON/OFF #7	BA MO 3 SP4			ON	
131	CONTRAST AVM1	#8	CONT 1			55	
132	CONTRAST AVM2	#8	CONT 2			57	
133	CONTRAST AVM3	#8	CONT 3			60	
134	CONTRAST AVM1 FL	#8	CONT 1 FL			55	
135	CONTRAST AVM2 FL	#8	CONT 2 FL			57	
136	CONTRAST AVM3 FL	#8	CONT 3 FL			60	
137	COLOUR AVM1	#9	COL 1			0	
138	COLOUR AVM2	#9	COL 2			0	
139	COLOUR AVM3	#9	COL 3			+10	
140	COLOUR AVM1 FL	#9	COL 1 FL			0	
141	COLOUR AVM2 FL	#9	COL 2 FL			0	
142	COLOUR AVM3 FL	#9	COL 3 FL			+10	
143	SHARP AVM1	#10	SHARP 1			-5	
144	SHARP AVM2	#10	SHARP 2			0	
145	SHARP AVM3	#10	SHARP 3			0	
146	SHARP AVM1 FL	#10	SHARP 1 FL			-5	
147	SHARP AVM2 FL	#10	SHARP 2 FL			0	
148	SHARP AVM3 FL	#10	SHARP 3 FL			0	
149	γ- POINT AVM1	#11	G-POINT 1			3	
150	γ- POINT AVM2	#11	G-POINT 2			2	
151	γ- POINT AVM3	#11	G-POINT 3			1	
152	γ- POINT AVM1 FL	#11	G-POINT 1 FL			3	
153	γ- POINT AVM2 FL	#11	G-POINT 2 FL			2	
154	γ- POINT AVM3 FL	#11	G-POINT 3 FL			1	
155	SEARCH SPEED	#12	S SPE			450	
156	OSD	0 ~ 127	OSD-H			2	
157	BUZZ	0 ~ 1	BUZZ	1 CHIP	BUZZ	0	
158	AV AFC	0 ~ 1	AV AFC			1	
159	TEXT H	0 ~ 63	TEXT H	TEXT		30	
160	TEXT V	0 ~ 63	TEXT V	TEXT		30	
161	NVM		NVM	EEPROM			

INITIAL SETTING

(1) Execute MCL 4key to set the following data in EEPROM.

	STTM		
R/C CODE	MCL 4(171:Abh)		
TV-CH.	CH-No.	Fv (MHz)	S-SYSTEM
0			
1	Thai Local CH-3	55.25	PAL B/G
2	Thai Local CH-5	175.25	PAL B/G
3	Thai Local CH-7	189.25	PAL B/G
4	Thai Local CH-9	203.25	PAL B/G
5	Thai Local CH-11	217.25	PAL B/G
6	Thai Local CH-29	535.25	PAL B/G
7			
8			
9			
10			
11	STTM Factory CH-E2	48.25	PAL B/G
12	STTM Factory CH-E4	62.25	PAL B/G
13	STTM Factory CH-E8	196.25	PAL B/G
14	STTM Factory CH-E10	210.25	SECAM B/G
15	STTM Factory CH-E12	224.25	PAL B/G
16	STTM Factory CH-E21	471.25	PAL B/G
17	STTM Factory CH-E69	855.25	PAL B/G
18			
19			
20			
21	STTM Factory CH-E12	223.95	PAL B/G
22	STTM Factory CH-E12	224.55	PAL B/G
23	STTM Factory CH-E12	223.85	PAL B/G
24	STTM Factory CH-E12	224.65	PAL B/G
25	STTM Factory CH-E12	223.75	PAL B/G
26	STTM Factory CH-E12	224.75	PAL B/G
27			
28			
29			
30			
31	STTM Factory CH-J1	91.25	NTSC M
32	STTM Factory CH-J3	103.25	NTSC M
33	STTM Factory CH-J4	171.25	NTSC M
34	STTM Factory CH-J6	183.25	NTSC M
35	STTM Factory CH-J8	193.25	NTSC M
36	STTM Factory CH-J10	205.25	NTSC M
37	STTM Factory CH-J12	217.25	NTSC M
38	STTM Factory CH-J38	217.25	NTSC M

SHIPPING SETTING AND CHECKING

(1) The following default data has been factory-set for the E^2PROM.

ITEMS	DATA SETTING
	FACTORYSET 9
R/C	238(EEh)
S-SYSTEM	B/G
LANGUAGE SELECT	THAI

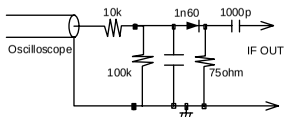
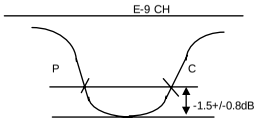
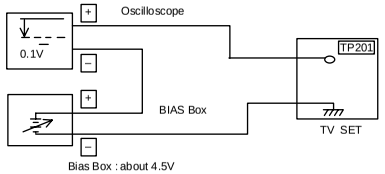
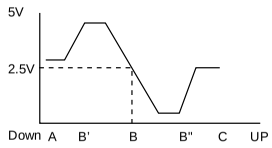
ITEM	DATA SETTING
LAST POWER	ON
LAST TV/AV MODE	TV
LAST CH	CH1
FLASH BACK	CH1
FAVORITE CH1	CH10
FAVORITE CH2	CH20
FAVORITE CH3	CH30
FAVORITE CH4	CH40
1 DIGIT/2 DIGIT	2 DIGIT
VOLUME	0
H/P-VOLUME	0
ROTATION	0
SAVE	OFF
AV MODE	2
BALANCE	0
BLUE BACK	OFF
AUTO SELECT	ON

ITEM	DATA SETTING
VM	OFF
TEXT	1
LNA	OFF
ON TIMER	IN ACTIVE
ON TIMER CH	IN ACTIVE
ON TIMER VOLUME	IN ACTIVE
REMINDER	IN ACTIVE
AFT	ALL CH ON
COLOUR SYSTEM	ALL CH AUTO
SKIP	ALL CH OFF
NICAM ON/OFF	ALL CH ON
NICAM STEREO MODE	ALL CH STEREO
NICAM BILINGUAL MODE	ALL CH M1
NICAM MONO MODE	ALL CH MONO
IGR ON/OFF	ALL CH ON
IGR STEREO MODE	ALL CH STEREO
IGR BILINGUAL MODE	ALL CH MAIN
MONO BILINGUAL MODE	SOUND1

MODE	1 SOFT	2 STANDARD	3 DYNAMIC
CONTRAST	#	#	#
COLOUR	#	#	#
BRIGHT	0	0	0
TINT	0	0	0
SHARPNESS	#	#	#
PEICTURE NR	OFF	OFF	OFF
WHITE TEMP	0	0	0
SHAKIT	OFF	OFF	OFF
BASS +	#	#	#
SOR/SPA	OFF	OFF	OFF
LEVEL	0	0	0
BASS	#	0	#
TREBLE	#	0	#

SERVICE MODE DATA

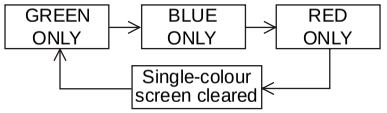
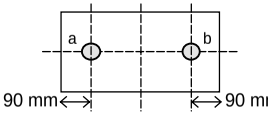
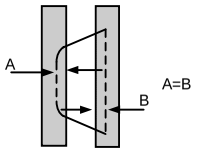
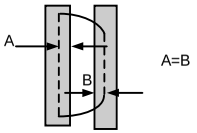
SERVICE ADJUSTMENT
PIF ADJUSTMENT CHECKING

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**Tuner IFT (PRESET) TU200**	1. Get the tuner ready to receive the CH. E-10 signal, but with no signal input. Adjust the PLL data. 2. Connect the sweep generator's output cable to the tuner antenna. (RF SWEEP) 3. Adjust the sweep generator's to 80dBμV. 4. Connect the response lead (use LOW IMPEDANCE probe with wave detector ; see **Fig.1**) to the tuner's IF output terminal. (This terminal must have the probe alone connected). 5. Set the RF AGC to 0 - 6 V with no saturation with the waveform. 6. Adjust the tuner IF coil to obtain the waveform as shown in **Fig. 2**. Note: Be sure to keep the tuner cover in position during this adjustment.	 **Fig. 1**  **Fig. 2**
2	**RF-AGC TAKE OVER POINT ADJUSTMENT (I²C BUS CONTROL)**	1. Receive the PAL Colour bar signal. Signal Strength: 54 ± 1 dbμV (75Ω open) 2. Connect the oscilloscope to TP201 (Tuner's AGC Terminal) as shown in **Fig. 3**.  **Fig. 3** 3. Call "AG" mode in service mode. Adjust the "AG" bus data to obtain the Tuner output pin drop 0.1 ~ 1.0 V below maximum voltage. 4. Change the antenna input signal to 63 ~ 67 dBμV, and make sure there is no noise. 5. Turn up the input signal to 90 ~ 95 dBμV to be sure that there is no cross modulation beat.	Note: For the 50Ω signal strength gauge, when not using 50/75 impedance adapter, signal strength is 52 ± 1 dBμV (75Ω open), instead of 54 ± 1 dBμV (75Ω open). Precaution: The loss of using impedance adapter.
3	**PIF VCO COIL ADJUSTMENT**	1. Do not receive any signal. 2. Connect the digital voltmeter to TP803 (pin (54) of IC800) in the main unit. 3. Call the "PIF VCO" Mode at the service mode. 4. Verify that it is turned counterclockwise to 0V and adjust T800 to make DC voltage of TP803 become 2.5 ± 0.1 V in the range.	DC voltage at TP803  Adjust T800 to B point, between B' and B". * Turn the coil counterclockwise for the up direction and clockwise for the down direction.

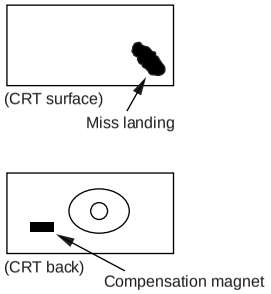
SOUND ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**SUB VOL (BUS ADJUSTMENT)**	1. Receive PAL Colour Bar signal. Signal content: 400 Hz 100% Mod. 2. Connect the probel of the meter (*) to (SI) connector. 3. Select the SUB-VOL in the service mode. 4. Adjust the SUB-VOL data to make the meter indicate 5.2 Vrms (at L-CH) Adjustment value: 5.0 ± 0.3 Vrms	Note:The setting below is automatically set when the SUB-VOL is selected in the service mode. * SURROUND OFF * AV MODE (STANDARD) * S-NORMAL state * S-VOL Max * Bass + OFF
2	**NOISE MUTE CHECKING**	1. Receive the PAL Colour Bar signal. 2. Turn up the volume control to maximum, make sure the sound is heard from the speakers. Then put the unit in no signal state. 3. Check the sound mute is effective. 4. Finally turn sound level of CTV to minimum.	

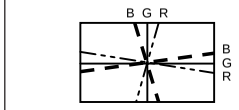
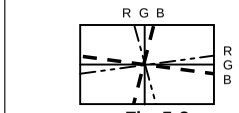
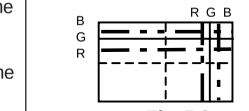
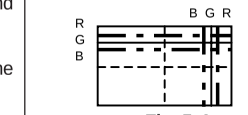
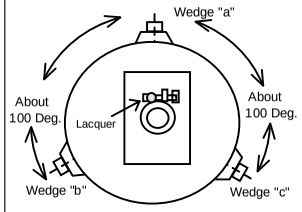
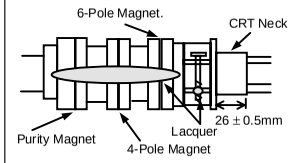
PURITY ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**PURITY ADJUSTMENT**	1. Select the green monocolour screen with remote controller, and set the beam current of 1,400μA with the contrast control. 2. Degauss the CRT enough with the degausing coil. For the adjustable magnetic field. Vertical Bv: 0.1G Horizontal Bh: 0.1G 3. Maintain the purity magnet at the zero magnetic field and keep the static convergence roughly adjusted. With P-MG, adjust it to the center - rank A. 4. Observe the points a, b, as shown in **Fig.4-1** through the microscope. Move DY fore and aft to set the landing at the point (rank A). 5. If the a/b balance is poor, compensate it to the center "Rank AB). 6. Align it to zero, keeping the raster rotation in the east direction. 7. Tighten the defrection coil fastening screw. Tightening torqu: 180N ± 20N (11kgf ± 2kgf) 8. Checking the CRT corner area, bond the magnetic sheet to set the landing at Rank A for compensation. Note:This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 1400 ± 50 μA. Note:Select the service mode, and press the monocolour key of R/C for process,and the monocolour screen (green) will be selected. Every push of the monocolor key changes the screen as follows. 	 **Fig. 4-1**  **Fig. 4-2 Rank A (On the right of CRT)**  **Fig. 4-3 Rank A (On the left of CRT)** * Press R/C RGB key for 1 second in NORMAL MODE, the colour will change to RGB mono colour mode. * Adjustment for uniformity is changed to another content. Please refer to the following page.

UNIFORMITY ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**Uniformity adjustment (To perform after the purity and convergence adjustment.)**	Before adjustment begin, Horizontal magnetic field = Vertical magnetic field = 0.1G Make sure degauss it. (North direction Red uniformity) 1. Horizontal mf = Set to monocolour screen Red and adjust to + 0.25G. 2. Pay attention to the edge of CRT, if the landing is poor, adjust by attaching the compensation magnet at the back of the CRT. (Refer to figure.) (South direction Red uniformity) 1. Horizontal mf = Set to monocolour screen Red and adjust to - 0.25G. 2. Pay attention to the edge of CRT, if the landing is poor, adjust by attaching the compensation magnet at the back of the CRT. (The same mothod is aplied for adjustment of monocolour screen Blue for blue uniformity, and changing both the magnetic field for North and South direction.) * During the pasting of compensation magnet, use the crosshatch pattern. Make sure there is no blur or bend lines occur. If the blur or bend lines are serious, adjust the location of compensation magnet to make it better.	

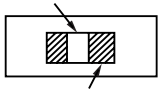
CONVERGENT ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**CONVERGENCE ADJUSTMENT (To be done after the purity adjustment.)**	1. Receive the Crosshatch Pattern signal. 2. Using the remote controller, call NORMAL mode. **Static convergence** 1. Turn the 4 - pole magnet to a proper opening angle in order to superpose the blue and red colours. 2. Turn the 6 - pole magnet to a proper opening angle in order to superpose the green colour over the blue and red colours. **Dynamic convergence** 1. Adjust the convergence on the fringes of the screen in the following steps. a) **Fig. 5-1:** Drive the wedge at point "a" and swing the deflection coil upward. b) **Fig. 5-2:** Drive the wedge at point "b" and "c" and swing the deflection coil downward. c) **Fig. 5-3:** Drive the "c" wedge deeper and swing the deflection coil rightward. d) **Fig. 5-4:** Drive the "b" wedge deeper and swing the deflection coil leftward. 2. Fix all the wedges on the CRT and apply glass tape over them. 3. Apply lacquer to the deflection yoke lock screw, magnet unit (purity, 4 - pole, 6 - pole magnets) and magnet unit lock screw. Finally received the Red - only and Blue - only signals to make sure there is no other colours on the screen.	 **Fig. 5-1**  **Fig. 5-2**  **Fig. 5-3**  **Fig. 5-4**  **Fig. 5-5**  **Fig. 5-6**

CUT OFF, BKGD ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**CRT CUTOFF (CUTOFF BKGD) SERVICE MODE I²C BUS DATA ADJUSTMENT**	1. Receive E-5CH "Monoscope Pattern" signal. 2. Select P-NORM with the remote controller. 3. Turn on the service switch, and select the CUT OFF BKGD mode at the service mode. 4. Select the screen VR 0/10. 5. Press "-/--" key of the remote controller to select the horizontal centering mode. 6. Turn the scteen VR clockwise, and adjust the first lighting horizontal centering rasterslighly light. 7. Adjust the CUT OFF data of two other colors, and coarsely adjust the horizontal centering to become white. (Note 1) 8. Turn the screen VR in the opposite direction to the point where the horizontal centering raster goes out. Note 1: Apply the adjustment after aging with the beam current 1,600±50µA or more for 30 min or more. 9. Press "-/--" key of the remote controller to select the normal mode.	* Befor doing adjustment, make sure the R/G/B-cut and the B/G-Drive is at initial value.
2	**WHITE BALANCE BACK-GROUND (CUT OFF BKGD) I²C BUS ADJUST-MENT (AV SIGNAL)**	1. Receive E-5CH "Monoscope Pattern" signal. 2. Select P-NORM with the remote controller. 3. Connect the beam ammeter between TP1601 and TP1602. 4. Coarsely adjust the beam current to approx. 1.6mA with R1759 (Sub-Contrast VR) 5. Receive the window pattern with AV input. (PAL burst is generated with the signal generator.) 6. With the data of G-drive and B-drive, adjust the color temperature 12,300°K of the white peak to white. 7. Adjust the right dark area of the window to 12,300°K with R-cut off, G-cut off and B-cut off. 8. Read just the color temperature at the white peak. 9. Check 12,300°K at the low white. Note1 : Apply this adjustment after aging with the beam current 1,400±50µA or more for 30 min or more. (On the white or green minocolor screen)	Note:Data up/Down is possible as below. R CUT OFF UP "1" KEY DOWN "4" KEY G CUT OFF UP "2" KEY DOWN "5" KEY B CUT OFF UP "3" KEY DOWN "6" KEY G-DRIVE UP "7" KEY DOWN "⇐" KEY B-DRIVE UP "8" KEY DOWN "0" KEY * 12,300°K X : 0.272 ± 0.005 Y : 0.275 ± 0.005 (With Monolta colour thermometer CA-100) * The colour temperature is based on the shipment initial setting table.
3	**WHITE BALANCE BACK-GROUND (CUT OFF DVD BKGD) I²C BUS ADJUSTMENT (DVD SIGNAL)**	1. The window pattern is received with DVD signal (component signal). 2. Apply the adjustment in the same manner as item 5 of adjustment 2 and the subsequence above. (17,000°K) (G-DRIVE, B-DRIVE, R-CUT OFF, G-CUT OFF, B-CUT OFF) Apply the adjustment after the end of adjustment 2.	Note2: Use the window pattern of the signal generator SX1006 for adjustment.(PAL, colour burst is generated with signal generator.)

SUB-CONT ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**MAX BEAM R1759**	1. Receive E-5CH "Monoscope pattern" with standard mode. 2. Make the pictur normal with the remote controller.(AV MODE: DYNAMIC) 3. Connect the beam ammeter between TP1601 & TP1602. Ammeter full scale-3mA range TP1602 is connected at the - side of the ammeter. TP1601 is connected at the + side of the ammeter. 4. Adjust the beam current to 1.6mA ± 20µA with R1759 (sub-contrast VR). Note : Apply the adjustment after aging with the beam current 1,400±50µA or more for 30 min or more. (On the white or green monocolor screen)	
2	**SUB-CONTRAST (SUB-CONT) I²C BUS ADJUSTMENT (AV SIGNAL)**	1. Receive the window pattern with AV input. 2. Make the picture normal with the remote controller.(AV MODE: DYNAMIC) 3. Select the SUB-CONTRAST adjustment mode with the remote controller, and adjust 50% white to 165 ± 10cd.	Note 3: Use "Y" of Minolta color analyzer CA-100 in adjustment. Note 4: Use the PAL window pattern of the signal generator for adjustment. (PAL and colour burst are provided.) Note 5:Window Pattern 50% white for SUB-CONT  Dark white for SUB-BRIGHT
3	**SUB-CONTRAST (SUB-CONT DVD) I²C BUS ADJUSTMENT (DVD SIGNAL)**	1. Select the DVD mode. 2. Receive the signal of the DVD signal generator. (Component signal) (Window pattern) 3. Make the picture normal with the remote controller.(AV MODE: DYNAMIC) 4. Select the SUB-CONTRAST adjustment mode (DVD) with the remote controller, and adjust 50% white to 165 ± 10 cd.	
4	**SUB-BRIGHTNESS (SUB-BRI) I²C BUS CON-TROL (AV SIGNAL)**	1. Receive the window pattern with AV input. 2. Make the picture normal with the remote controller.(AV MODE: DYNAMIC) 3. Select the SUB-BRIGHT adjustment mode with the remote controller, and adjust the right dark white area of the window pattern to 5.5 ± 0.5 cd.	* When E-2 CH (Crosshatch pattern) or equivalent signal is received. 1.Make the image normal with the remote controller. 2.Adjust the 3rd (1 thru 5 from the left) black of the window pattern to sink. CUT OFF POINT
5	**SUB-BRIGHTNESS (SUB-BRI DVD) I²C BUS CONTROL (DVD SIGNAL)**	1. Select the DVD mode. 2. Receive the signal of the DVD signal generator. (Component signal) (Window pattern) 3. Make the picture normal with the remote controller.(AV MODE: DYNAMIC) 4. Select the SUB-BRIGHT adjustment mode (DVD) with the remote controller, and adjust the right dark white area of the window pattern to 5.5 ± 0.5 cd of window pattern.	

HORIZONTAL, VERTICAL, DEFLECTION LOOP AND ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**MAIN SCREEN ADJUSTMENT**		The receiving channel in ( ) are following signals. (E-2):Crosshatch(50Hz) (E-5):Monoscope(50Hz)
	V-AMP 50	Adjust the overscan to 8.5%.(Monoscope)(E-5)	
	V-LINE 50	Adjust the linearity to the best. (E-5)	
	V S-CORR 50	Already preset. (Adjust this unless the linearity is achieved.) (E-2)	
	V-CENT 50	Align the center of the screen to the geometric center of CRT. (E-5)	
	H-CENT 50	Align the center of the screen to the geometric center of CRT. (E-5)	
	H-SIZE 50	Adjust the overscan to 8.5% ± 0.5%. (E-5)	
	E/W-PAR 50	Adjust the 2nd vertical line from the left end of crosshatch pattern so that the midddle 4 blocks are straight.(E-2) (Refer to Fig.6-1)	
	E/W-COR 50	Adjust the 2nd vertical line from the left end of crosshatch pattern so that the top are straight.(E-2) (Refer to Fig.6-2)	
	TRAPE 50	Adjust the 2nd vertical line from the left end of crosshatch pattern so that the D1 (center area of the first vertical line-edge of screen) and D2 (top area of the first vertical line-edge of the screen) are same. (E-2) (Refer to Fig.6-3)	
	V-ENT	Already preset.	
	H-ENT	Already preset.	
	OTHER	On the items of V-AMP 60, V-LINE 60, V S-CORR 60, V-CENT 60, H-CENT 60, H-SIZE 60, E/W-PAR 60, E/W-COR 60 and TRAPE 60, the compensation data is automatically input if the 50Hz mode adjusutment is done. Do not change 50Hz mode data after adjust 60Hz mode data.Because 60Hz mode data follow 50Hz mode data automatically.	However, if it is largely deviated when it is checked in 60Hz mode, readjust it in the 60Hz mode.
	I²C BUS ADJUSTMENT		

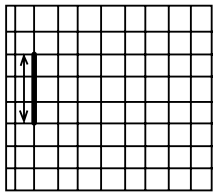


Fig. 6-1

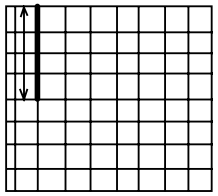


Fig. 6-2

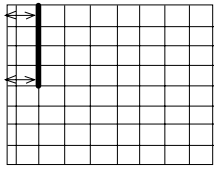
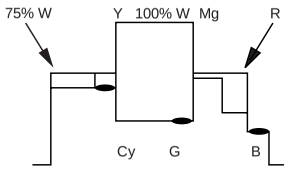
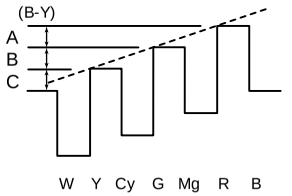


Fig. 6-3

PAL CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**SUB COLOUR (I²C BUS CONTROL)**	1. Receive the PAL Colour Bar signal. 2. Make the image normal with the remote controller. 3. Connect the oscilloscope to pin (4) of TP802 (ky). (Use Probe10:1) Range : 2V/Div Sweep time : 20µ sec/Div 4. Set the sub colour adjustment mode with the remote controlller, and vary the sub colour data to make 75% W of the colour bar and RED at the same level for adjustment shown in **Fig. 7**.	 **Fig. 7**

NTSC CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**SUB-TINT (I²C BUS CONTROL)**	1. Select the sub-tint adjustment mode (automatic Y cut) to receive NTSC colour bar signal. 2. Connect the oscilloscope to TP801. Range : 20mV/Div (AC) (Use Probe 10:1) Sweep time : 20µ sec/Div 3. Vary the sub tint data to adjust the waveform to be gained as shown in **Fig 8**. TP801……(KY) 6 pin	 **Fig. 8** A=B=C

FUNCTION OPERATION CHECKING (1) (VIDEO & AUDIO)

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**CONTRAST Key**	1. Receive "Monoscope Pattern" signal. 2. Press to MENU mode, then Select Picture Mode and set to select CONTRAST. 3. Press Volume Up/Down key to check whether the CONTRAST effect is OK or not.	
2	**COLOUR Key**	1. Receive "Color Bar" signal. 2. Press to MENU mode, then Select Picture Mode and set to select COLOUR. 3. Press Volume Up/Down key to check whether the COLOUR effect is OK or not.	
3	**BRIGHTNESS**	1. Receive "Monoscope Pattern" signal. 2. Press to MENU mode, then Select Picture Mode and set to select BRIGHTNESS. 3. Press Volume Up/Down key to check whether the BRIGHTNESS effect is OK or not.	
4	**TINT Key**	1. Receive the "NTSC Colour Bar" signal thru AV in. 2. Press to MENU mode, then Select Picture Mode and set to selectTINT. 3. Press Volume Up/Down key to check TINT, UP for GREEN direction and DOWN for RED direction whether is OK or not.	
5	**SHARPNESS Key**	1. Receive "Monoscope Pattern" signal. 2. Press to MENU mode, then Select Picture Mode and set to select SHARPNESS. 3. Press Volume Up/Down key to check whether the SHARPNESS effect is OK or not.	
6	**NORMAL Key**	1. Once in PICTURE Mode, and the NORMAL key is pressed, all the settings will be present to normal setting. (Normal setting value for every mode, refer to page 7-2.)	Notes: If nothing is display mean contrast, colour, bright, tint, sharpness are all in normal setting.
7	**WHITE TEMP**	1. Receive the Monoscope Pattern signal. 2. Set FUNCTION to select WHITE TEMP. 3. Press Volume Up/Down key to check WHITE TEMP Option, STANDARD: NORMAL SETTING, WARM for more REDDISH direction changing, COOL for more BLUISH direction changing.	

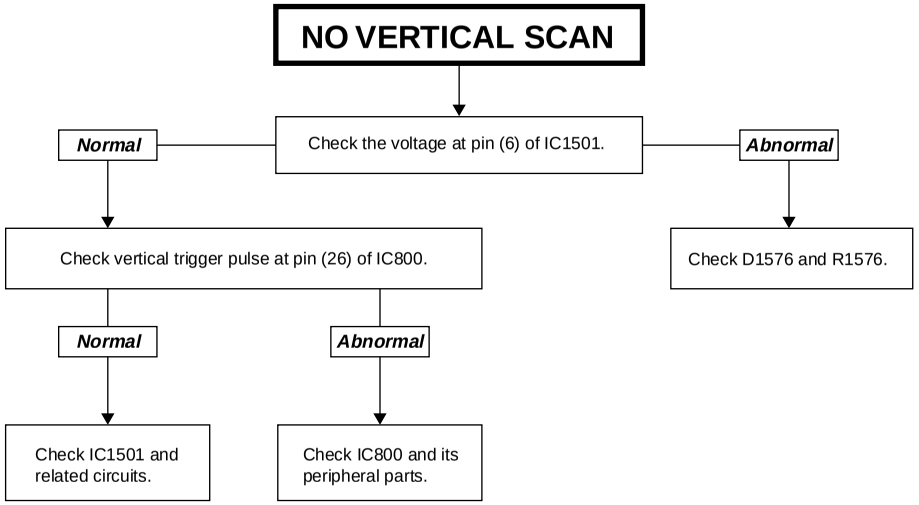
FUNCTION OPERATION CHECKING (2) (VIDEO & AUDIO)

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
8	**COLOUR SYSTEM**	1. Receive the "PAL COLOUR BAR" signal thru AV, press the COLOUR SYSTEM key to select modes except PAL, check the COLOUR is not working properly. Then, select the "PAL" mode. Check again its colour so that it is working properly. 2. Receive “NTSC 3.58” signal thru AV, press COLOUR SYSTEM key to select modes except NTSC3.58, check the COLOUR is not working properly. Then, select the “NTSC 3.58” mode. Check again its colour so that it is working properly. 3. Receive “NTSC 4.43 COLOUR BAR” signal thru AV, press COLOUR SYSTEM key to select modes except N4.43, check the COLOUR is not working properly. Then, select the “NTSC 4.43” mode. Check again its colour so that it is working properly.	
9	**HEADPHONE OUTPUT CHECKING**	1. Receive the PAL Colour Bar signal with sound 400 Hz, 100% modulation (± 50 kHz Dev) 2. Maximum volume, and check the headphone output with 400 kHz sound and no sound out from speaker. SUB-VOL ADJ / H/P Output (Open) 63 / 1.0Vp-p 40 / 500mVp-p	

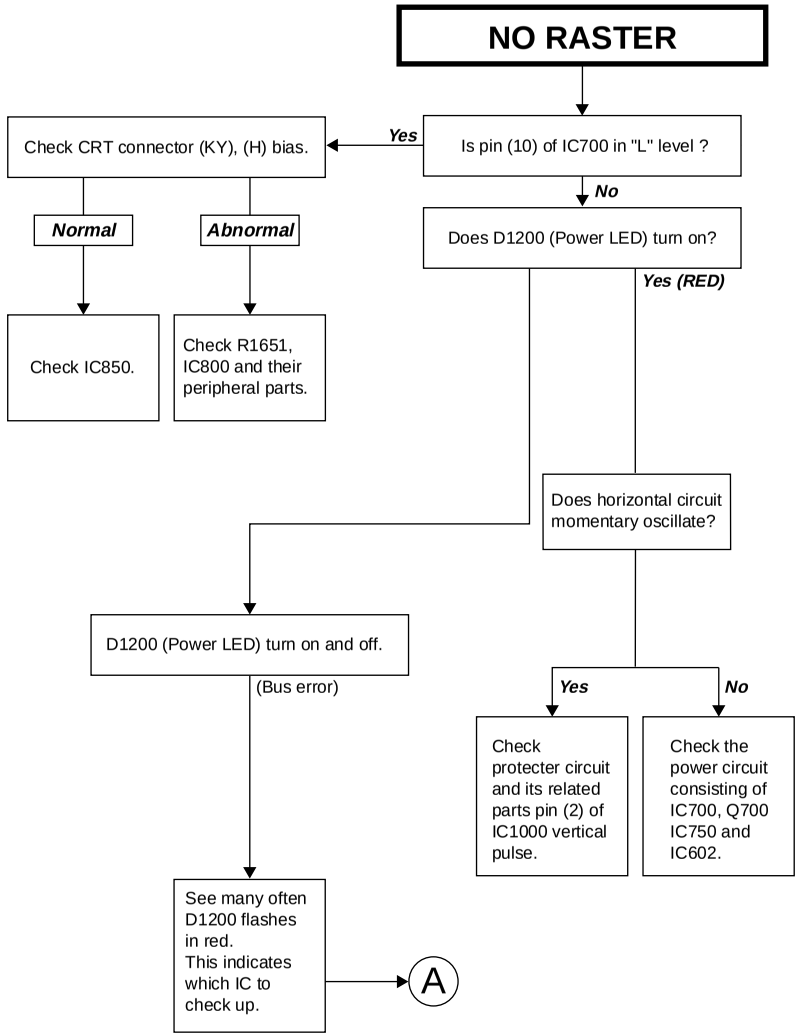
PROTECTOR OPERATION CHECKING

No.	Adjustment point	Adjustment Condition / Procedure	Waveform or others
1	**H, V PROTECTOR**	1. Receive E-5CH "Monoscope Pattern" signal. 2. Connect the Bias Box to D1621 cathode (R1620 side). 3. Set voltage of Bias Box to 15V and make sure the protector is not work. 4. Set voltage of Bias Box to 24V, and make sure the protector is work.	Reference Approx. 17.7V as ordinary.
2	**OTHER PROTECTOR**	* Correspondence for short circuit of smoothing electrolysis of +B line and so on. To check the operation of the protector and so on, take care for the breakage, deterioration and so on of each element.	

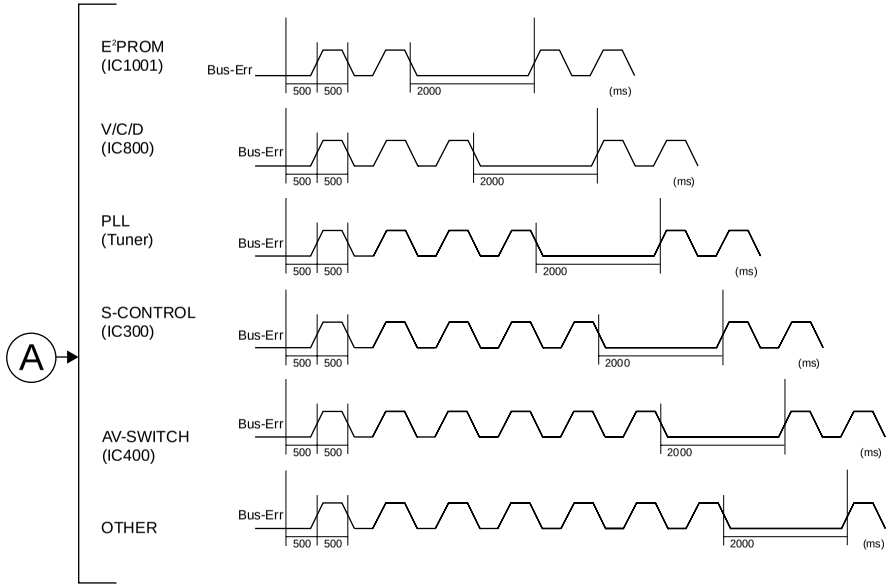
TROUBLE SHOOTING TABLE



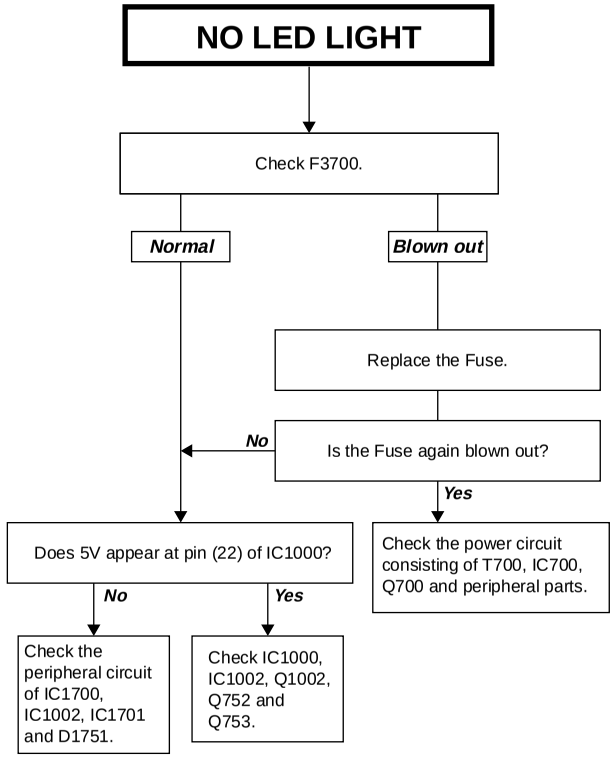
TROUBLE SHOOTING TABLE (Continued)


NO RASTER
Is pin (10) of IC700 in "L" level ?
Yes
No
Check CRT connector (KY), (H) bias.
Does D1200 (Power LED) turn on?
Yes (RED)
Normal
Abnormal
Check IC850.
Check R1651, IC800 and their peripheral parts.
Does horizontal circuit momentary oscillate?
D1200 (Power LED) turn on and off.
(Bus error)
Yes
No
Check protecter circuit and its related parts pin (2) of IC1000 vertical pulse.
Check the power circuit consisting of IC700, Q700 IC750 and IC602.
See many often D1200 flashes in red. This indicates which IC to check up.
A

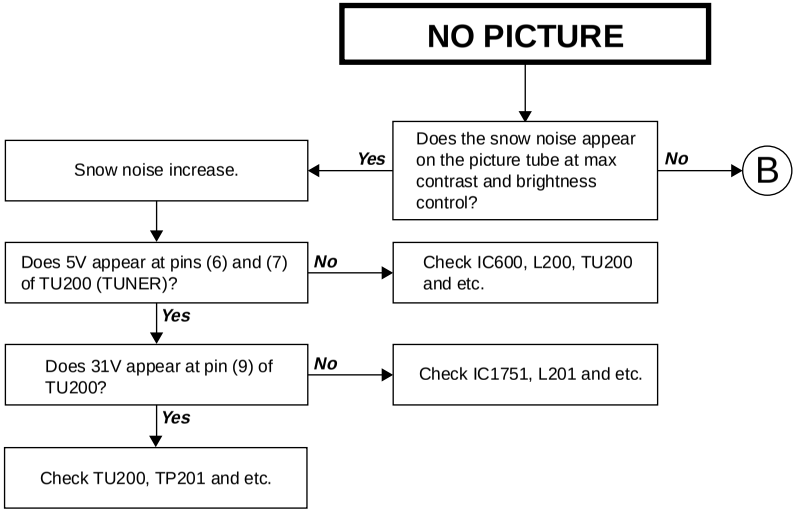
TROUBLE SHOOTING TABLE (Continued)



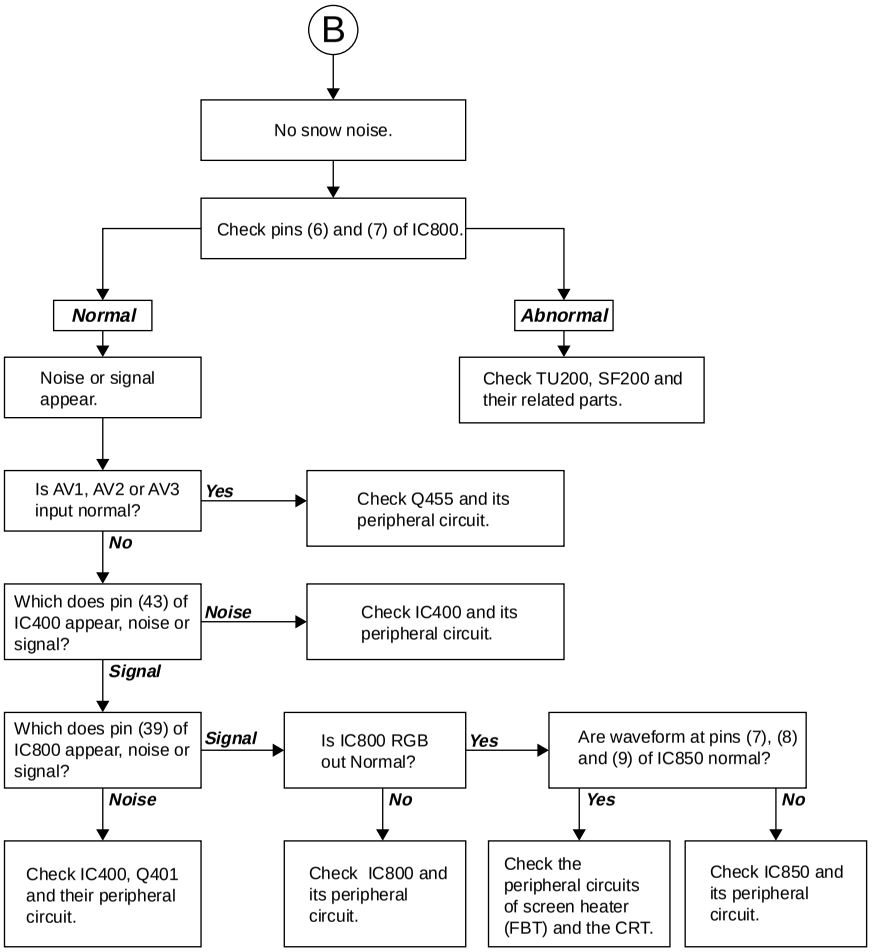
TROUBLE SHOOTING TABLE (Continued)


NO LED LIGHT
Check F3700.
Normal
Blown out
Replace the Fuse.
No
Is the Fuse again blown out?
Yes
Does 5V appear at pin (22) of IC1000?
Check the power circuit consisting of T700, IC700, Q700 and peripheral parts.
No
Yes
Check the peripheral circuit of IC1700, IC1002, IC1701 and D1751.
Check IC1000, IC1002, Q1002, Q752 and Q753.

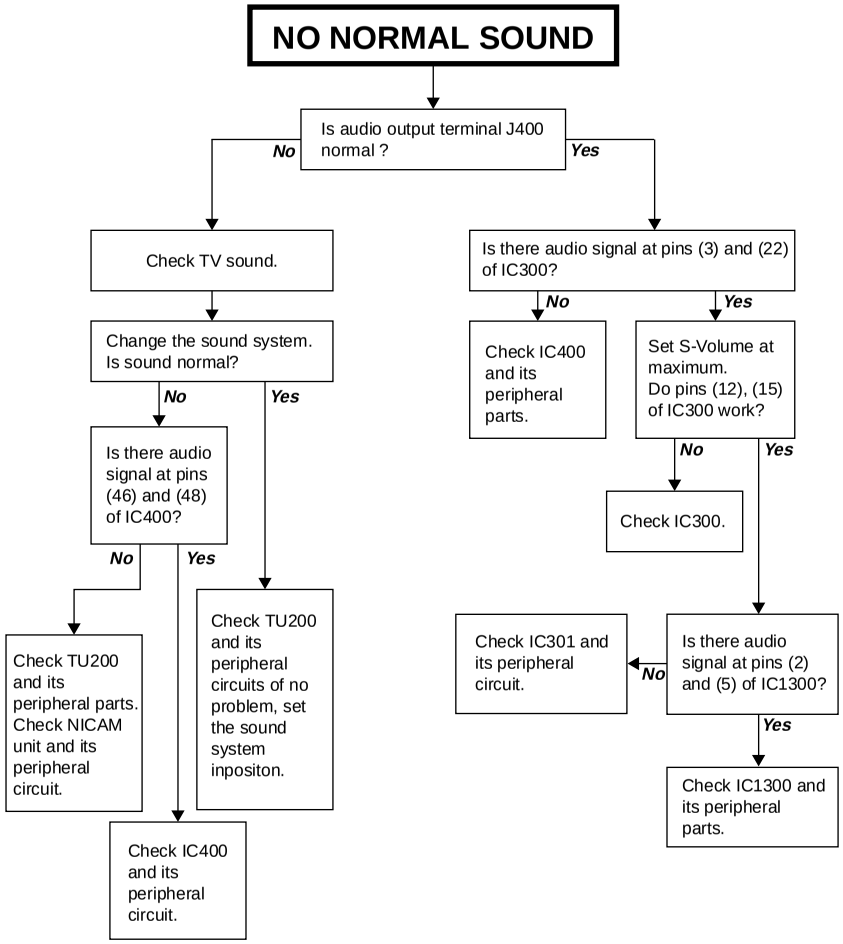
TROUBLE SHOOTING TABLE (Continued)


NO PICTURE
Does the snow noise appear on the picture tube at max contrast and brightness control?
Yes
No
B
Snow noise increase.
Does 5V appear at pins (6) and (7) of TU200 (TUNER)?
No
Check IC600, L200, TU200 and etc.
Yes
Does 31V appear at pin (9) of TU200?
No
Check IC1751, L201 and etc.
Yes
Check TU200, TP201 and etc.

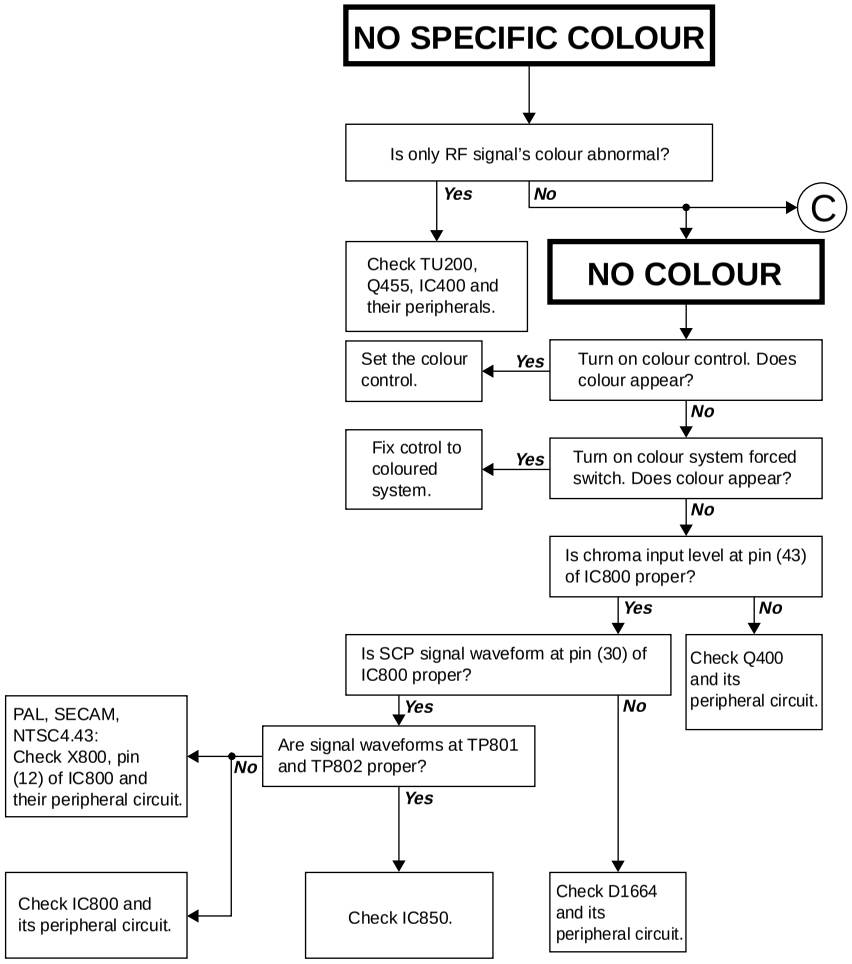
TROUBLE SHOOTING TABLE (Continued)


B
No snow noise.
Check pins (6) and (7) of IC800.
Normal
Abnormal
Noise or signal appear.
Check TU200, SF200 and their related parts.
Is AV1, AV2 or AV3 input normal?
Yes
Check Q455 and its peripheral circuit.
No
Which does pin (43) of IC400 appear, noise or signal?
Noise
Check IC400 and its peripheral circuit.
Signal
Which does pin (39) of IC800 appear, noise or signal?
Signal
Is IC800 RGB out Normal?
Yes
Are waveform at pins (7), (8) and (9) of IC850 normal?
Noise
No
Yes
No
Check IC400, Q401 and their peripheral circuit.
Check IC800 and its peripheral circuit.
Check the peripheral circuits of screen heater (FBT) and the CRT.
Check IC850 and its peripheral circuit.

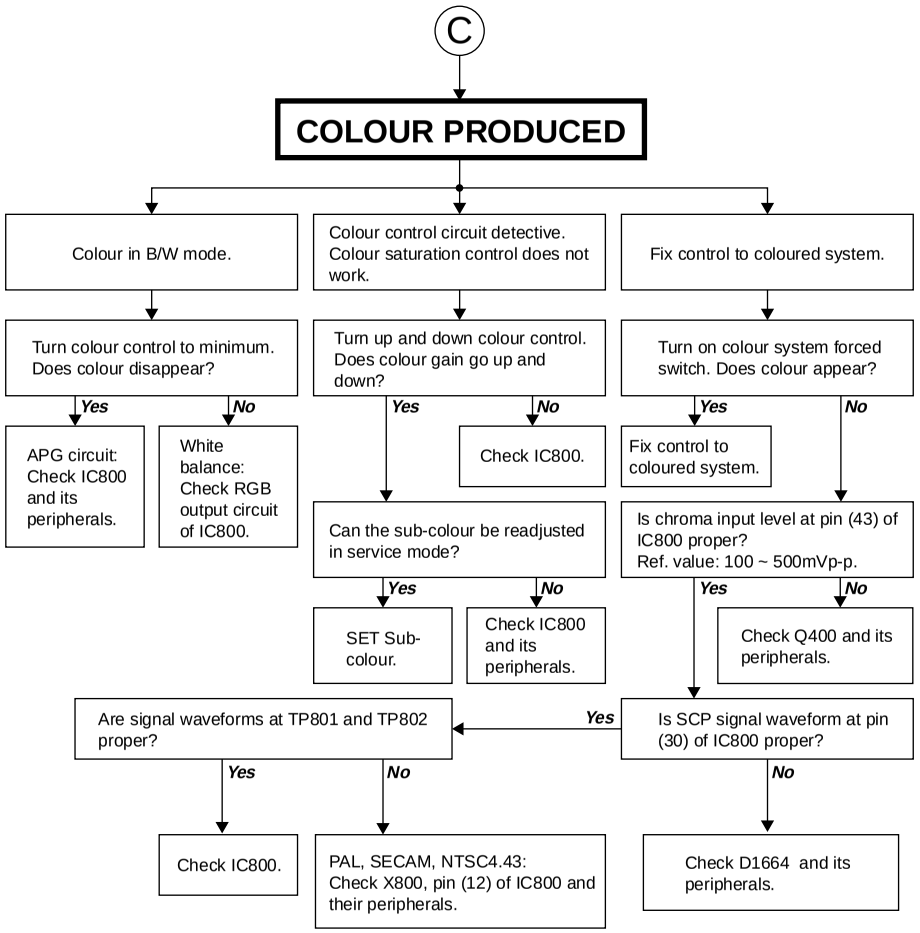
TROUBLE SHOOTING TABLE (Continued)


NO NORMAL SOUND
Is audio output terminal J400 normal ?
No
Yes
Check TV sound.
Change the sound system. Is sound normal?
No
Yes
Is there audio signal at pins (46) and (48) of IC400?
No
Yes
Check TU200 and its peripheral parts. Check NICAM unit and its peripheral circuit.
Check IC400 and its peripheral circuit.
Check TU200 and its peripheral circuits of no problem, set the sound system inpositon.
Is there audio signal at pins (3) and (22) of IC300?
No
Yes
Check IC400 and its peripheral parts.
Set S-Volume at maximum. Do pins (12), (15) of IC300 work?
No
Yes
Check IC300.
Is there audio signal at pins (2) and (5) of IC1300?
No
Yes
Check IC301 and its peripheral circuit.
Check IC1300 and its peripheral parts.

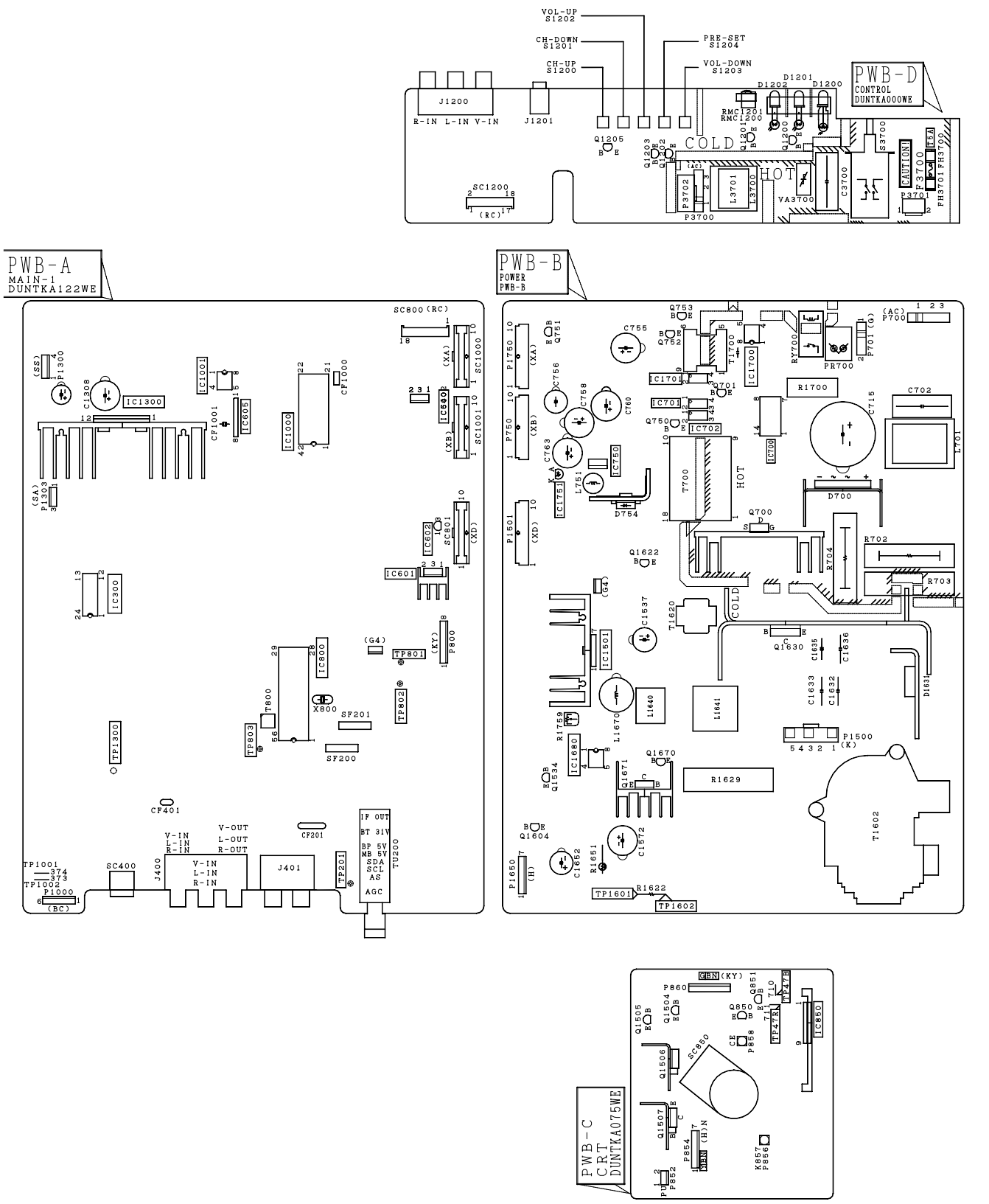
TROUBLE SHOOTING TABLE (Continued)


NO SPECIFIC COLOUR
Is only RF signal's colour abnormal?
Yes
No
C
Check TU200, Q455, IC400 and their peripherals.
NO COLOUR
Set the colour control.
Yes
Turn on colour control. Does colour appear?
No
Fix cotrol to coloured system.
Yes
Turn on colour system forced switch. Does colour appear?
No
Is chroma input level at pin (43) of IC800 proper?
Yes
No
Check Q400 and its peripheral circuit.
Is SCP signal waveform at pin (30) of IC800 proper?
Yes
No
Are signal waveforms at TP801 and TP802 proper?
No
Yes
PAL, SECAM, NTSC4.43: Check X800, pin (12) of IC800 and their peripheral circuit.
Check IC800 and its peripheral circuit.
Check IC850.
Check D1664 and its peripheral circuit.

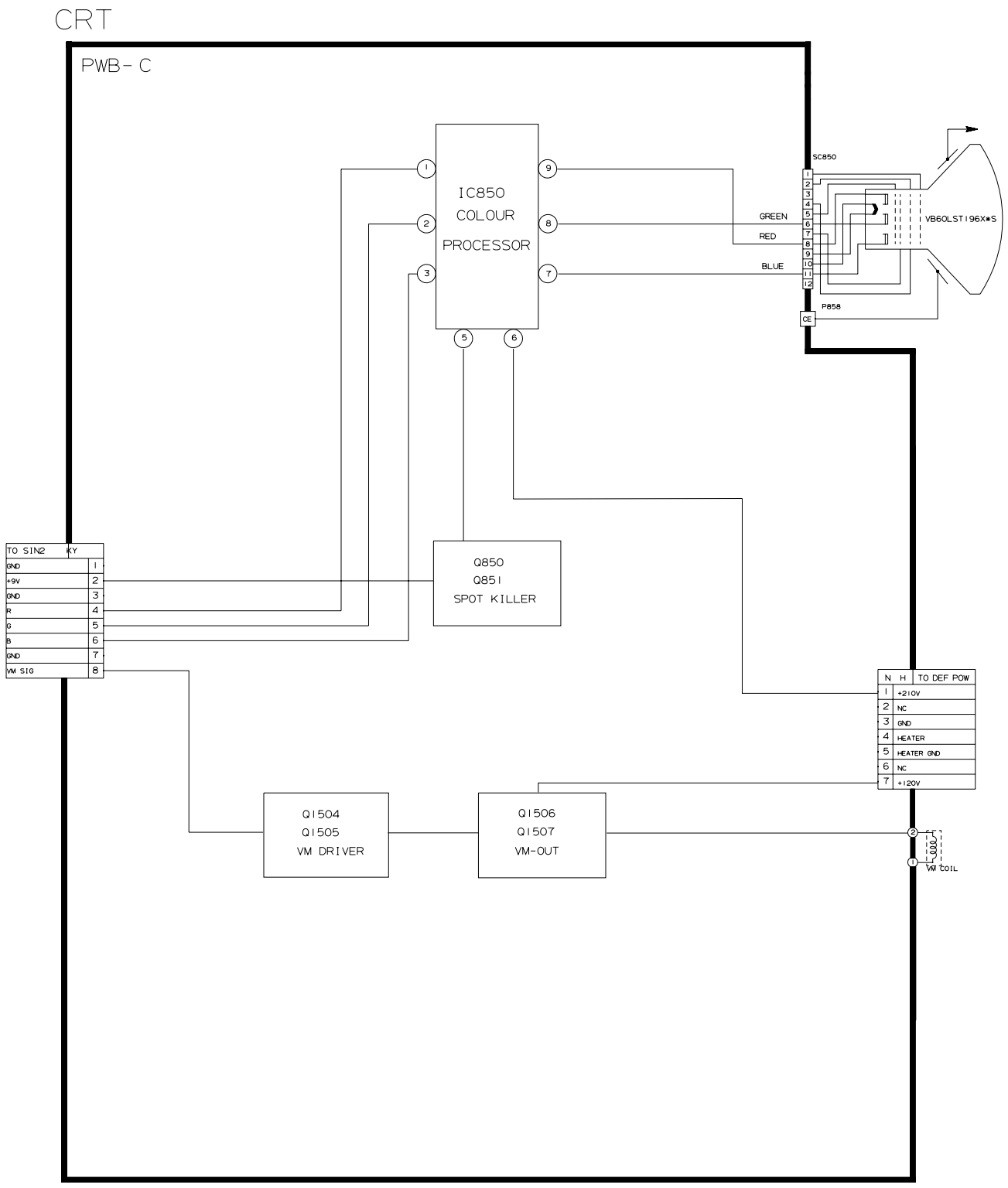
TROUBLE SHOOTING TABLE (Continued)


C
COLOUR PRODUCED
Colour in B/W mode.
Colour control circuit detective. Colour saturation control does not work.
Fix control to coloured system.
Turn colour control to minimum. Does colour disappear?
Turn up and down colour control. Does colour gain go up and down?
Turn on colour system forced switch. Does colour appear?
Yes
No
APG circuit: Check IC800 and its peripherals.
White balance: Check RGB output circuit of IC800.
Check IC800.
Fix control to coloured system.
Can the sub-colour be readjusted in service mode?
Is chroma input level at pin (43) of IC800 proper? Ref. value: 100 ~ 500mVp-p.
SET Sub-colour.
Check IC800 and its peripherals.
Check Q400 and its peripherals.
Are signal waveforms at TP801 and TP802 proper?
Is SCP signal waveform at pin (30) of IC800 proper?
Check IC800.
PAL, SECAM, NTSC4.43: Check X800, pin (12) of IC800 and their peripherals.
Check D1664 and its peripherals.

CHASSIS LAYOUT

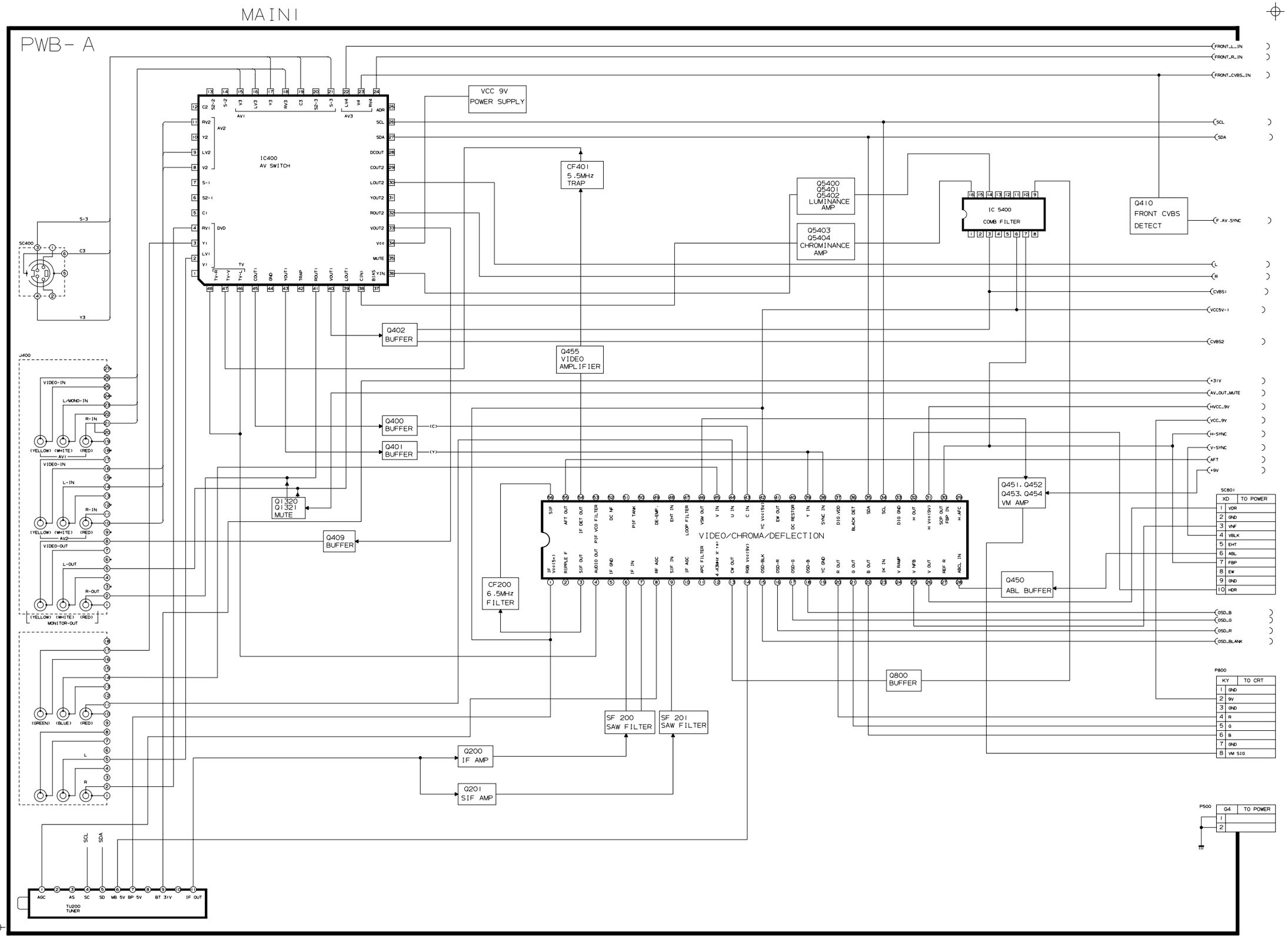


BLOCK DIAGRAM-1



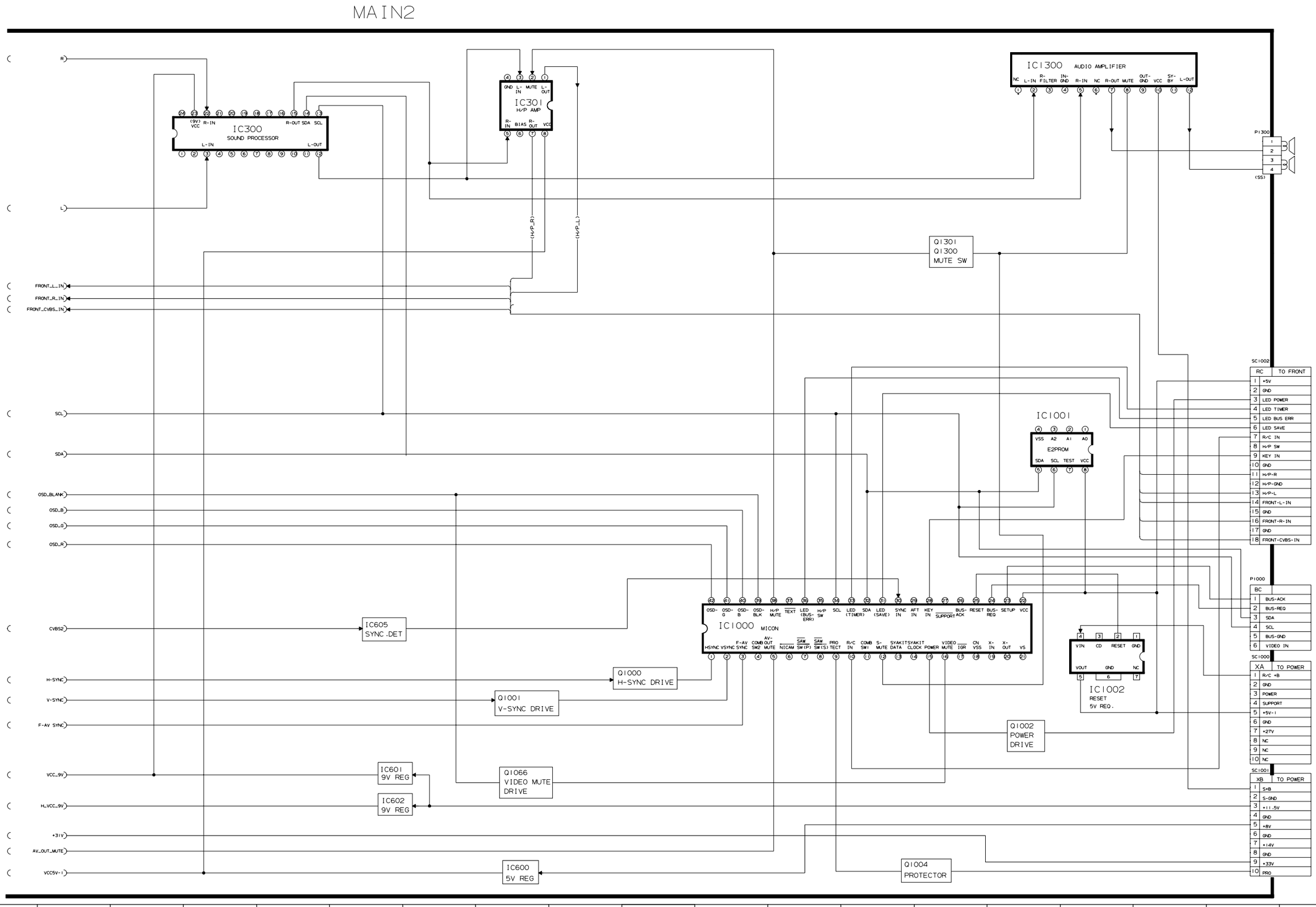
25WF30

BLOCK DIAGRAM-2



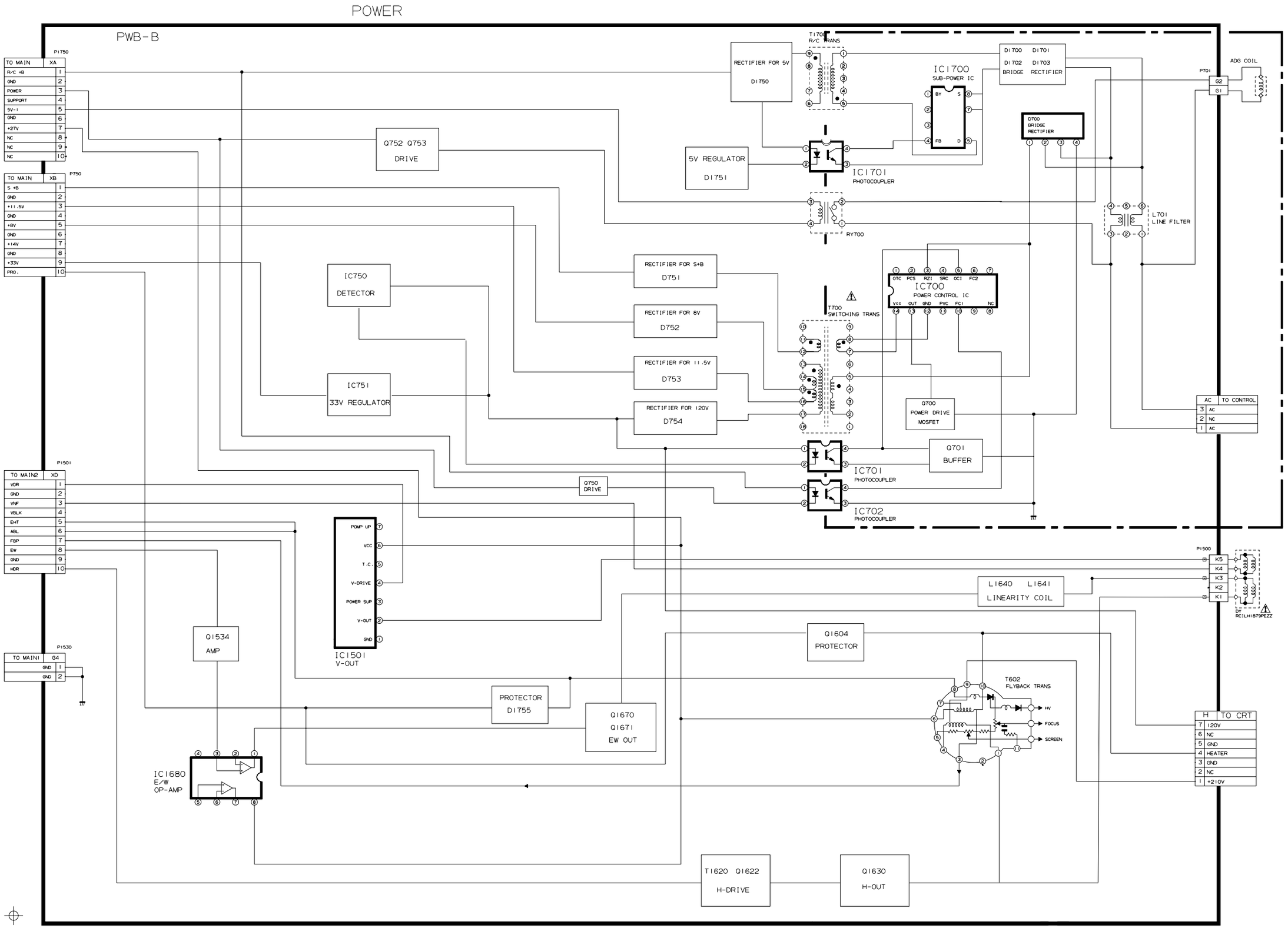
25WF30

BLOCK DIAGRAM-3

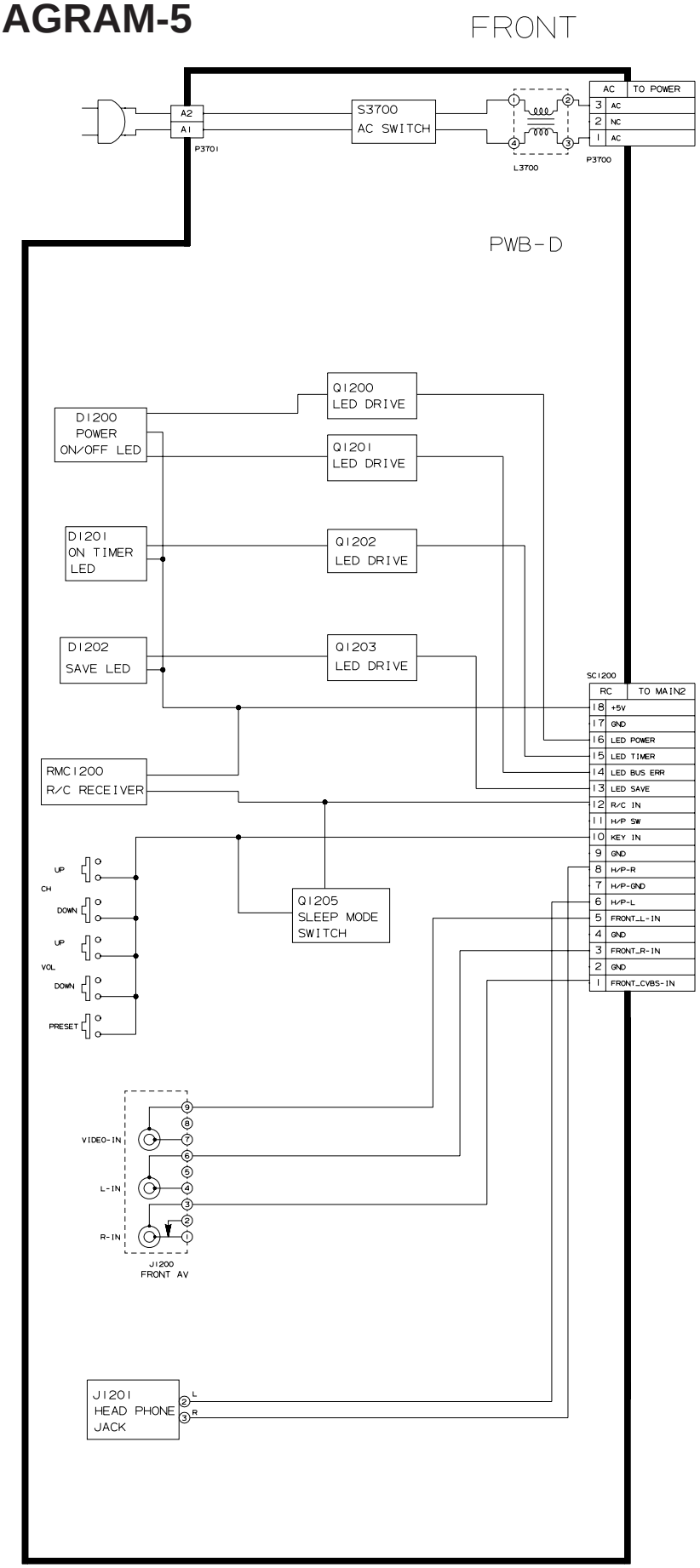


25WF30

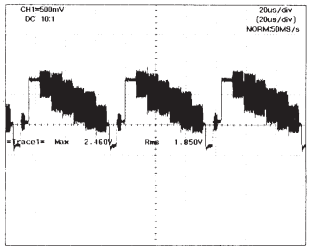
BLOCK DIAGRAM-4



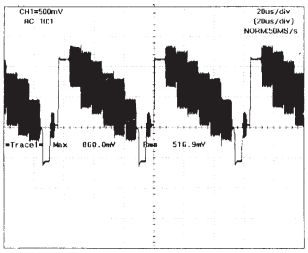
BLOCK DIAGRAM-5



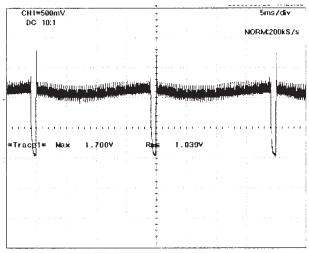
WAVEFORMS



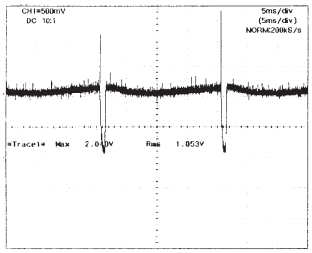
Pin 1 Vp-p=2.46v



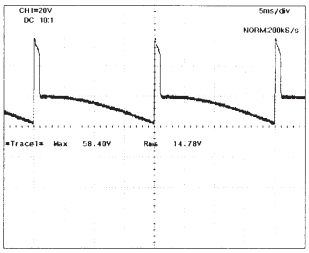
Pin 2 Vp-p=1.8v



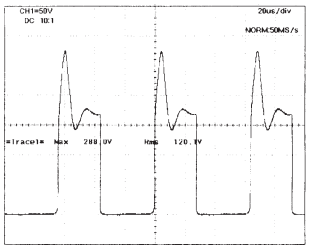
Pin 3 Vp-p=1.7v



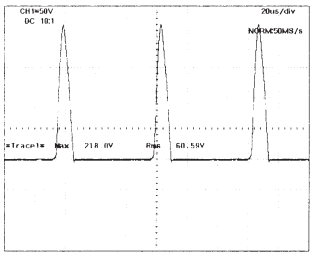
Pin 4 Vp-p=2.04v



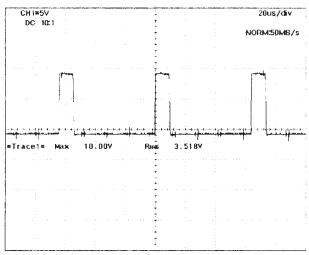
Pin 5 Vp-p=58.4v



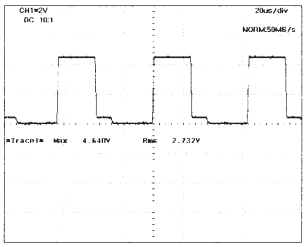
Pin 6 Vp-p=288v



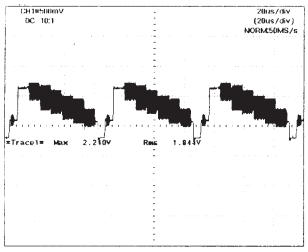
Pin 7 Vp-p=1090v



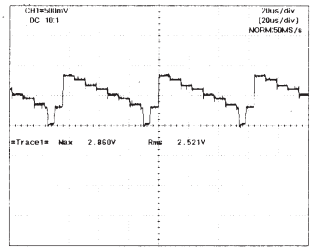
Pin 8 Vp-p=10v



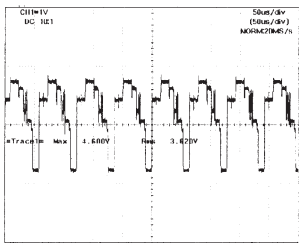
Pin 9 Vp-p=4.64v



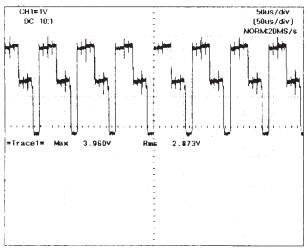
Pin 10 Vp-p=1.0v



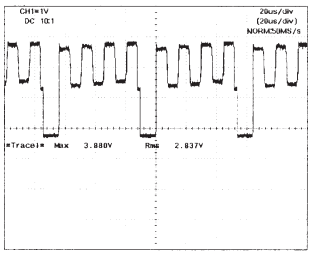
Pin 11 Vp-p=1.0v



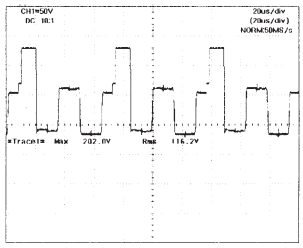
Pin 12 Vp-p=4.6v



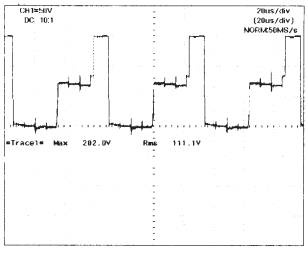
Pin 13 Vp-p=3.96v



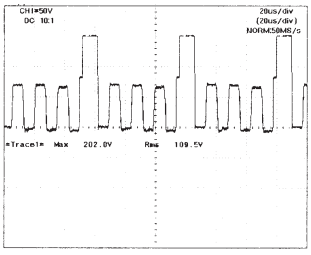
Pin 14 Vp-p=3.88v



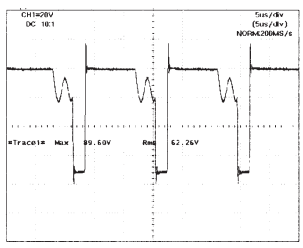
Pin 15 Vp-p=150.0v



Pin 16 Vp-p=150.0v



Pin 17 Vp-p=150.0v



Pin 18 Vp-p=448.0v

DESCRIPTION OF SCHEMATIC DIAGRAM

SAFETY NOTES:

1. *DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.*
2. *SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.*

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (▬ ▬ ▬) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.
WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

NOTES:

1. *The unit of resistance "ohm" is omitted. (K = 1000 ohms, M = Meg ohm).*
2. *All resistors are 1/16 watt, unless otherwise noted.*
3. *All capacitors are μF, unless therwise noted. (P = μμF).*

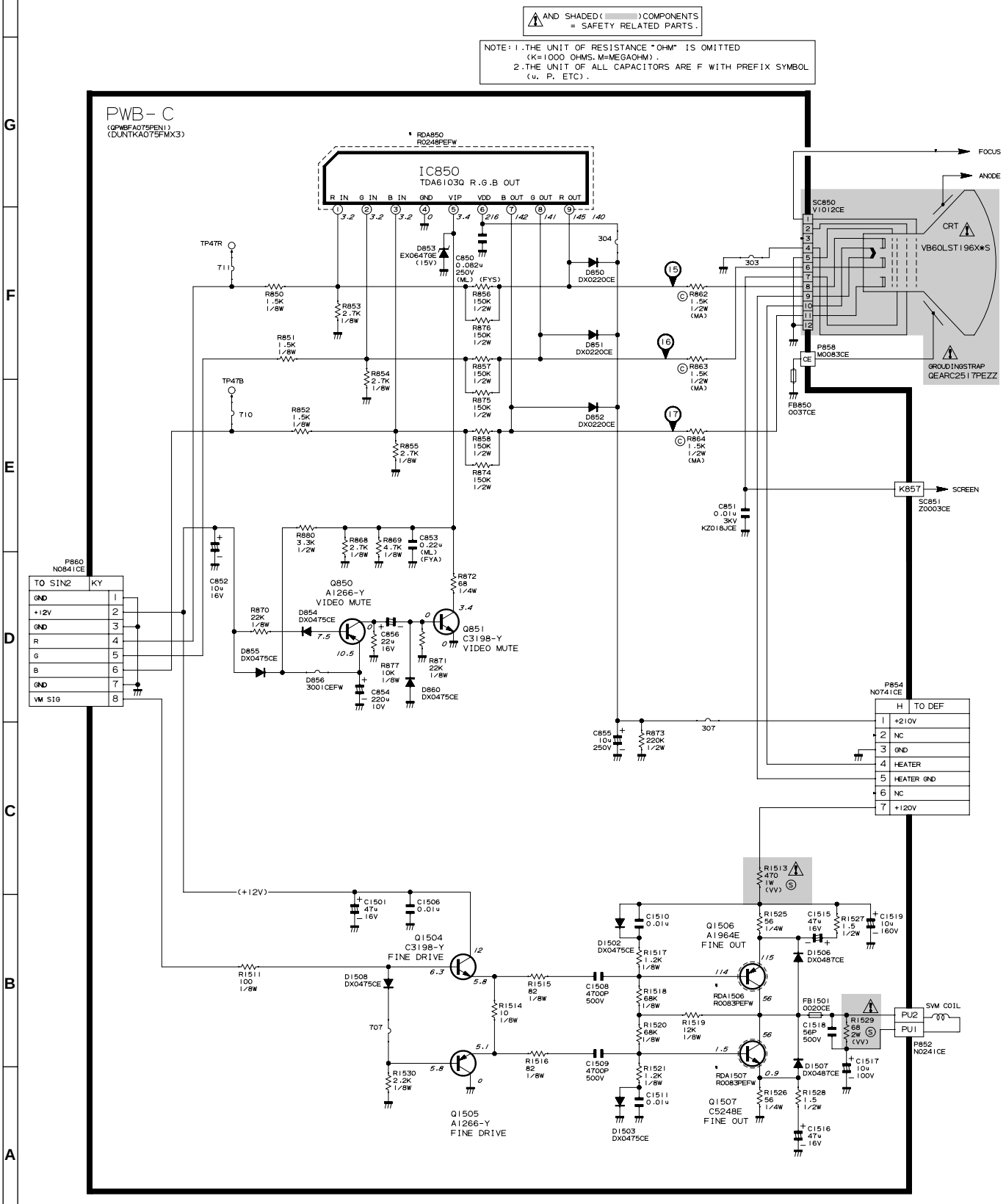
VOLTAGE MEASUREMENT CONDITIONS:

1. *Voltage in parenthesis measured with no Signal.*
2. *Voltages without parenthesis measured with PAL Colour-Signal.*
3. *All the voltages in each point are measured with high impedence volt-meter.*

WAVEFORM MEASUREMENT CONDITIONS:

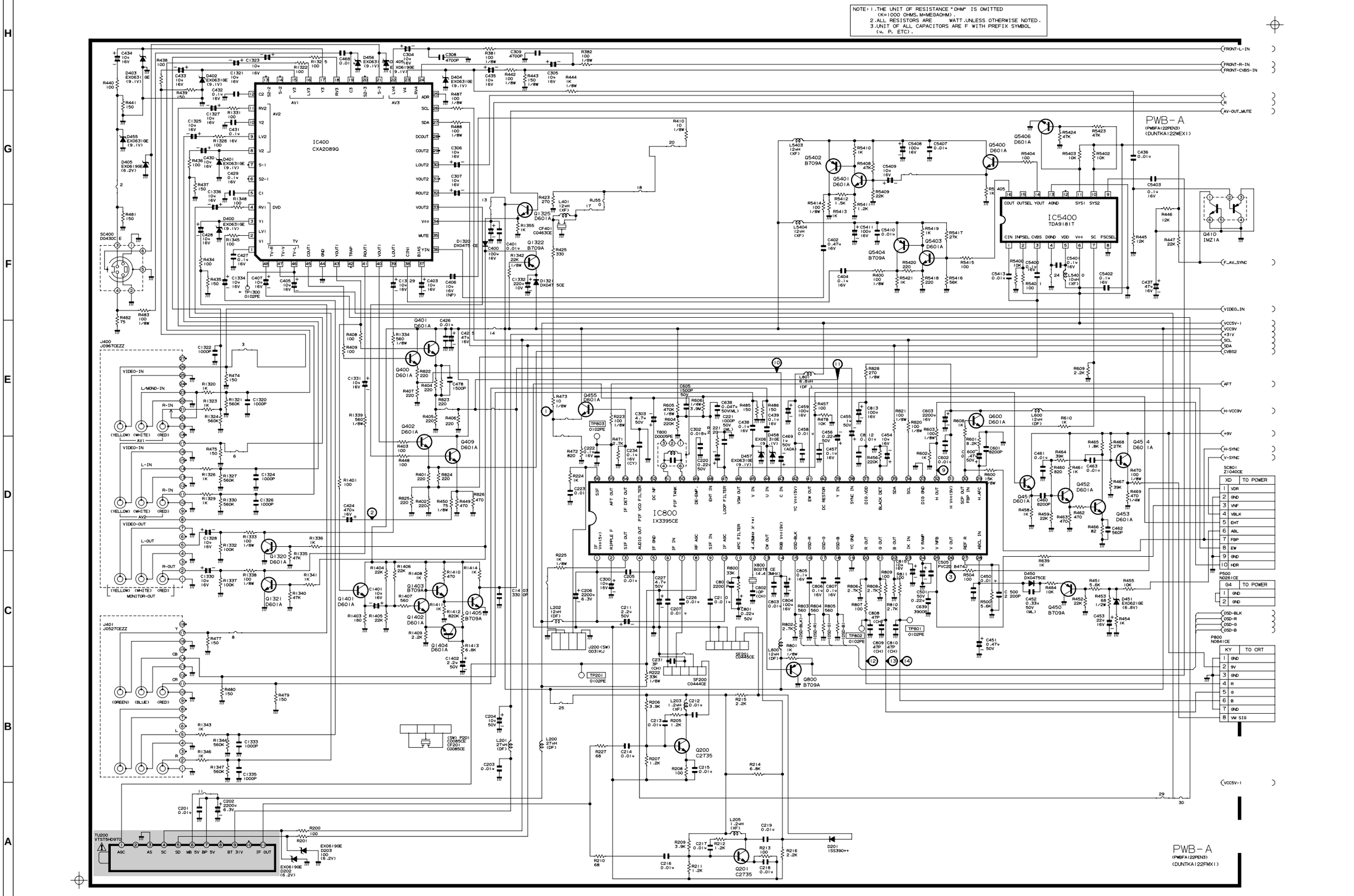
1. *Colour bar generator signal of 2.5V peak to peak applied at Base of Video Buffer Amp. Q203.*
2. *Approximately 4.0 V AGC bias.*

SCHEMATIC DIAGRAM: CRT Unit



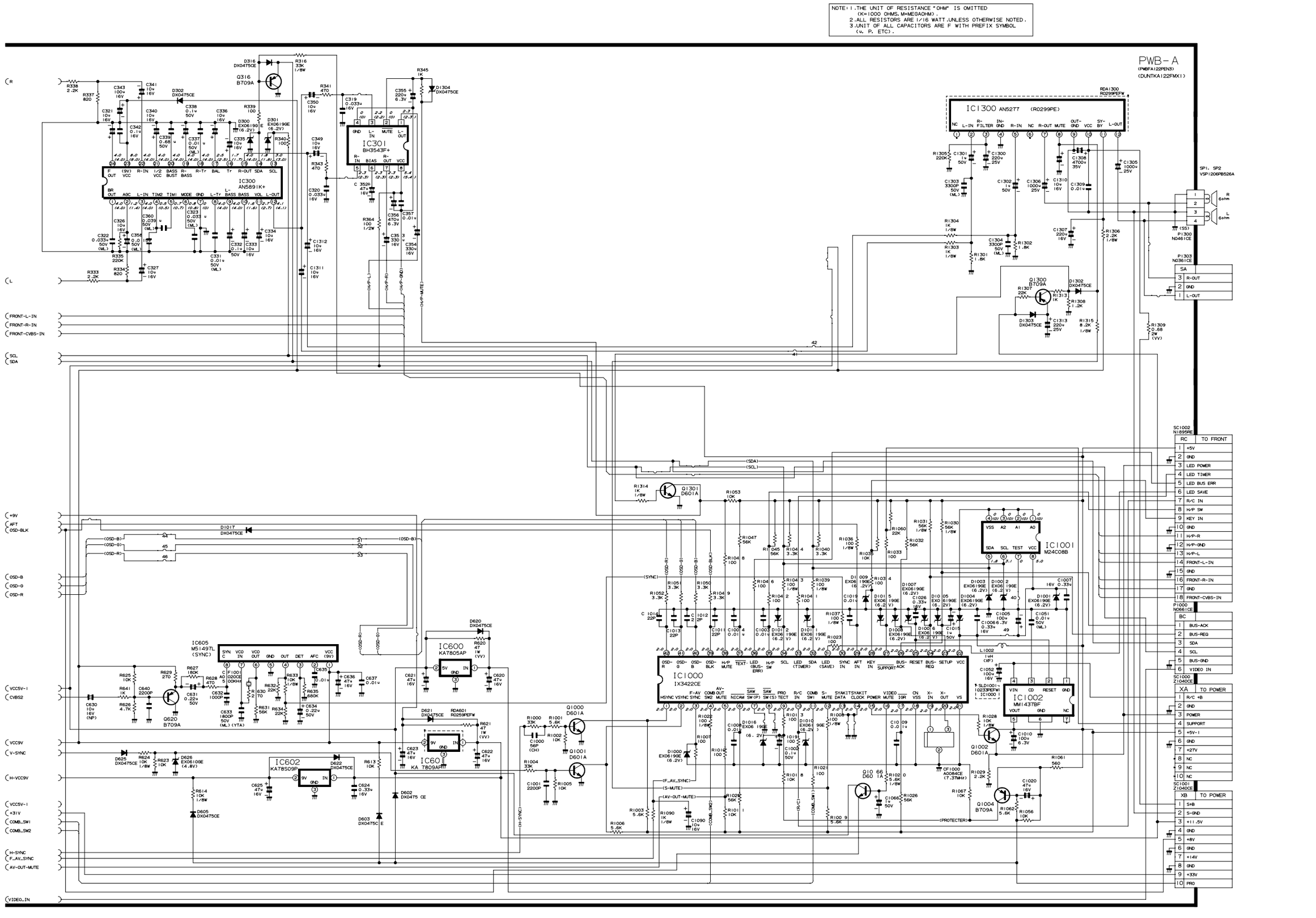
25WF30

SCHEMATIC DIAGRAM: MAIN-1/2 Unit



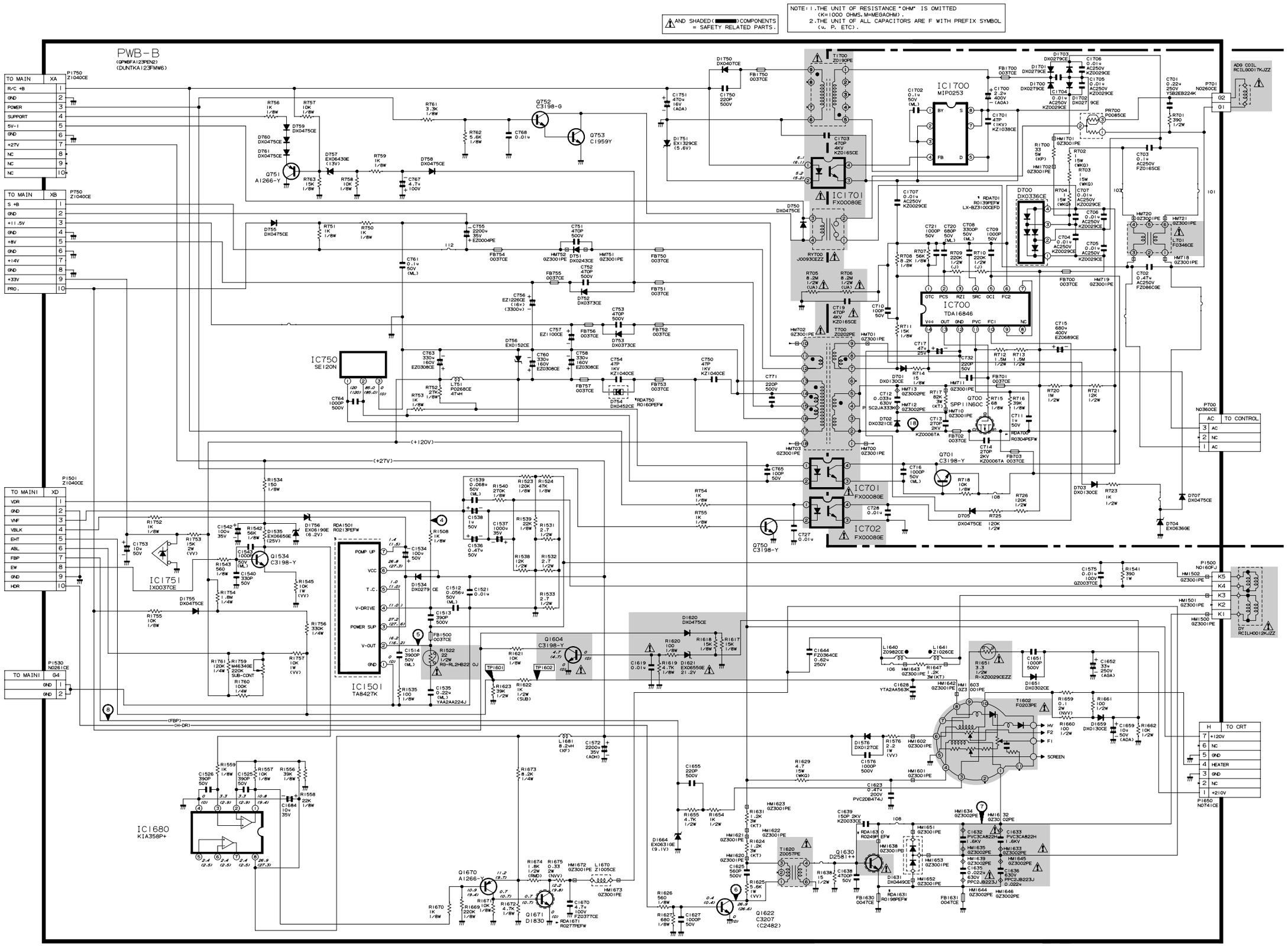
25WF30

SCHEMATIC DIAGRAM: MAIN-2/2 Unit

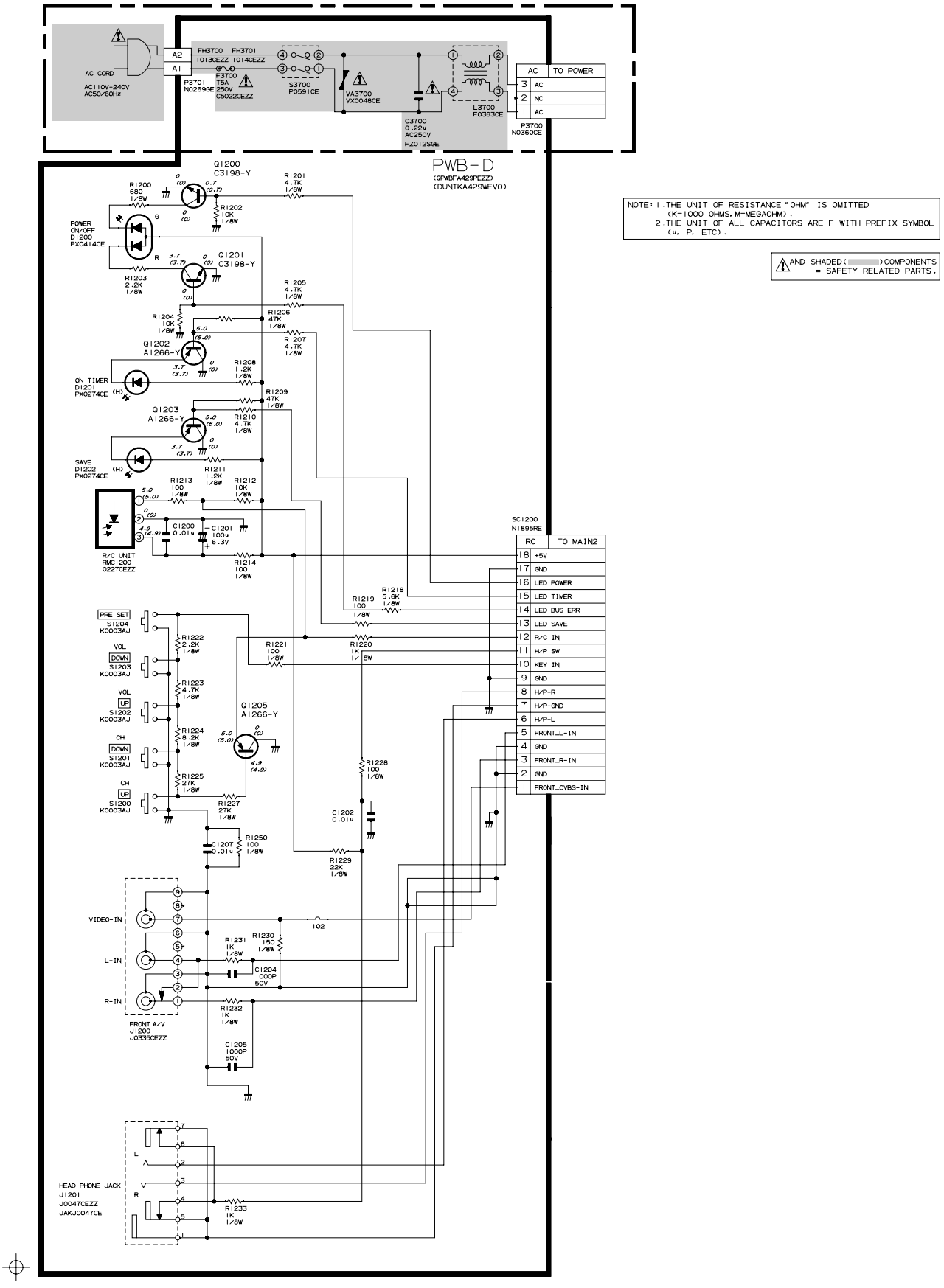


25WF30

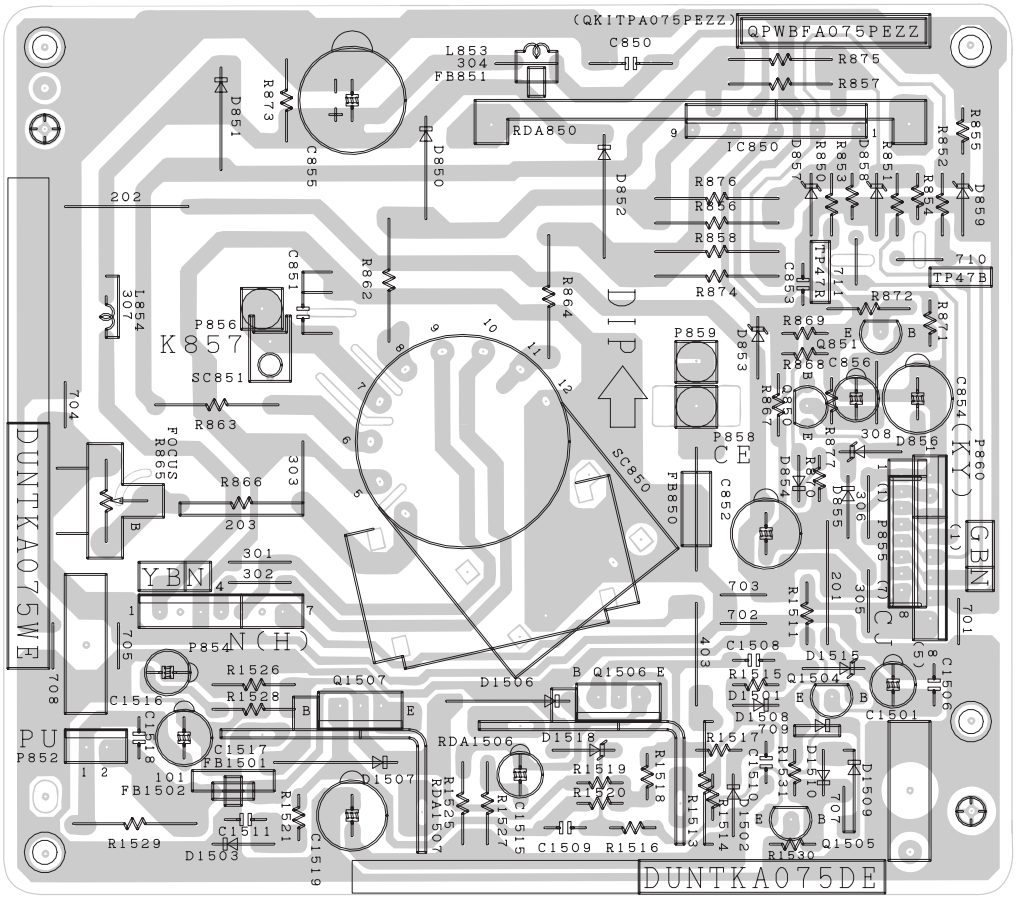
SCHEMATIC DIAGRAM: POWER Unit



SCHEMATIC DIAGRAM: OPERATION Unit

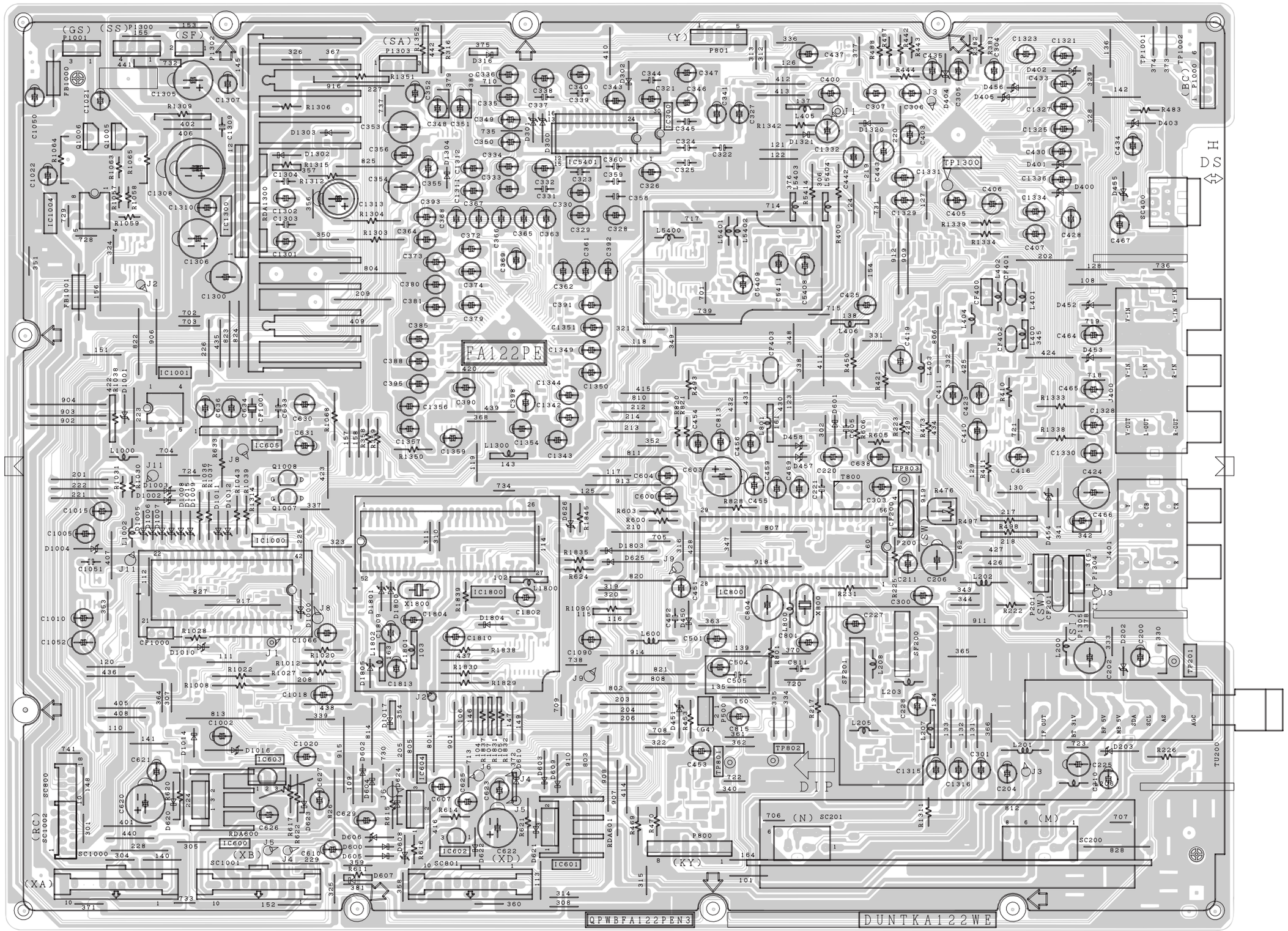


PRINTED WIRING BOARD ASSEMBLIES



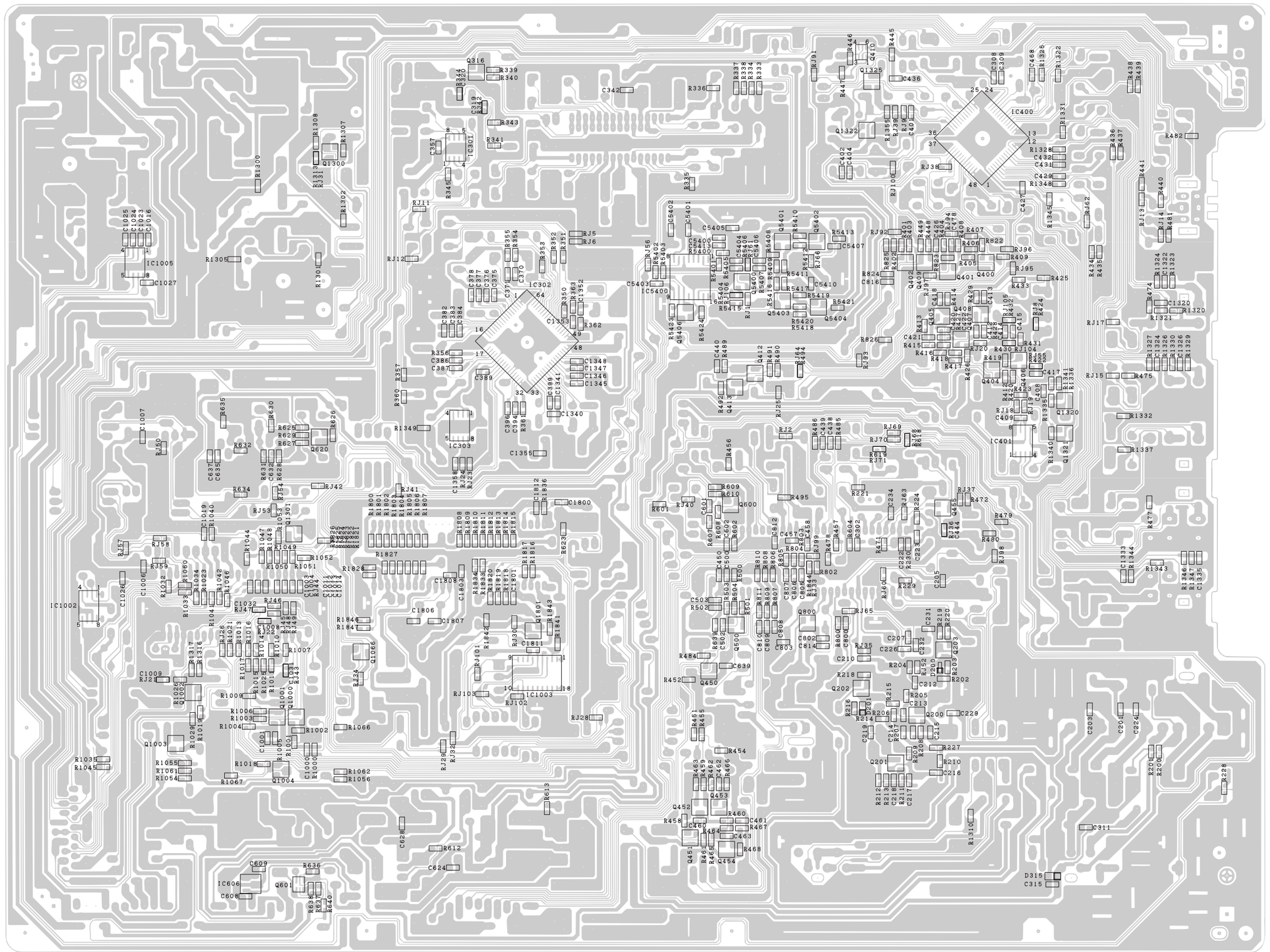
PWB-C: CRT Unit (Wiring Side)

25WF30



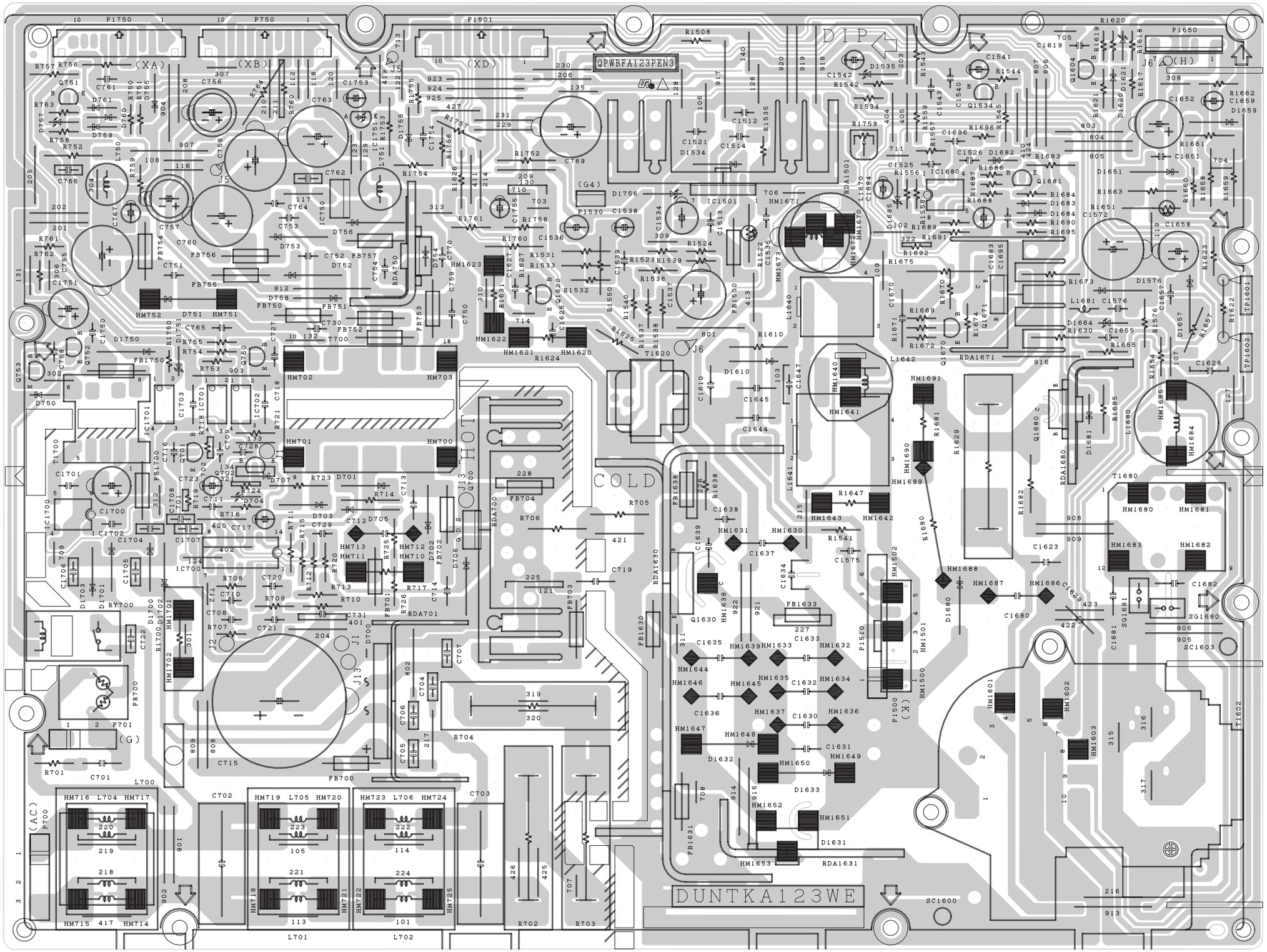
PWB-A: MAIN Unit (Wiring Side)

25WF30

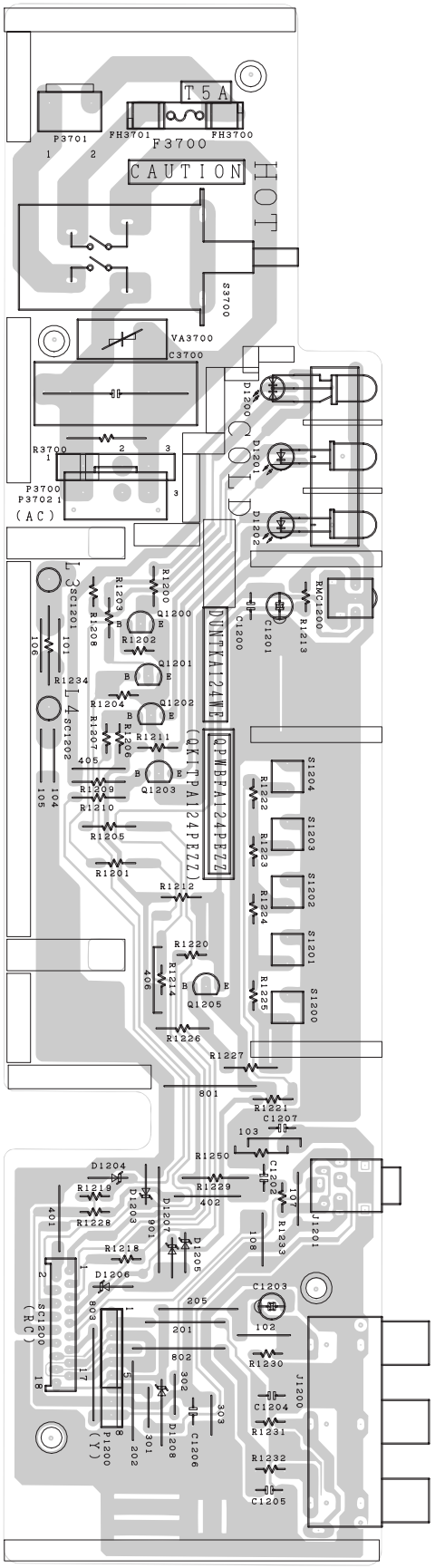


PWB-A: MAIN Unit (Chip Parts Side)

25WF30



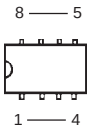
PWB-B: POWER Unit (Wiring Side)



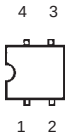
PWB-D: OPERATION Unit (Wiring Side)

SOLID STATE DEVICE BASE DIAGRAM

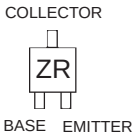
TOP VIEW



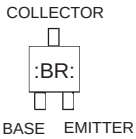
M24C08W



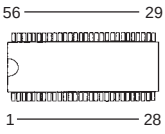
FX0008GE



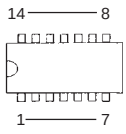
D601A



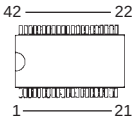
B709A



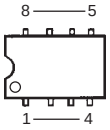
iX3395CEN2



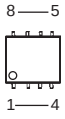
TDA16846



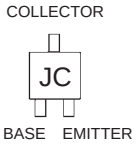
iX3422CE



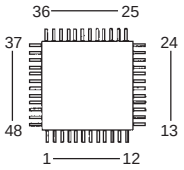
BH3543F



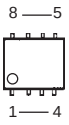
MM1437BF



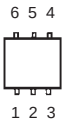
2SC2735



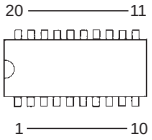
CXA2089Q



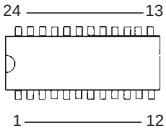
KA358P



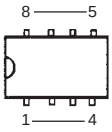
VSiMZ1A



TDA9181T

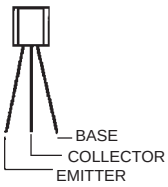


AN5891K

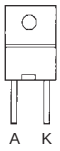


MiP0253

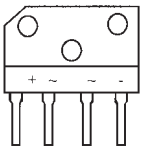
SIDE VIEW



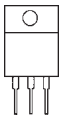
2SC3198-Y
2SC3198-G
2SC1959-Y



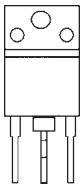
DX0452CE



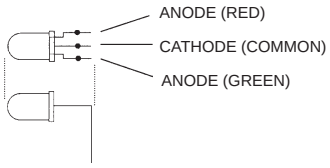
DX0336CE



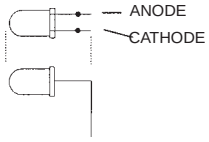
SE120N



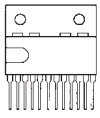
2SD2581



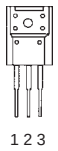
PX0414CE



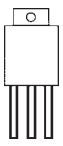
PX0274CE



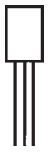
AN5277



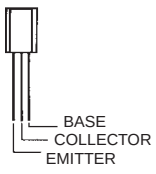
KA7809
KA7805



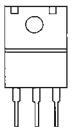
SPP11N60C



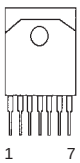
2SA1266-Y



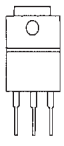
2SC3207



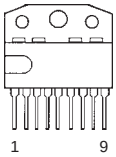
2SD1830



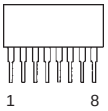
TA8427



2SC5248
2SA1964

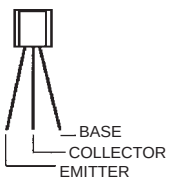


TDA6103Q



M51497L

iX0037



KA78S09P

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual: electrical components having such features are identified by "⚠" in the Replacement Parts Lists.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER 2. REF. NO.
3. PART NO. 4. DESCRIPTION

MARK ★: SPARE PARTS-DELIVERY SECTION

Ref. No.	Part No.	★	Description	Code

PICTURE TUBE

⚠	VB6OLST196X*S		Picture Tube	
⚠	RCiLG0017KJZZ		Degaussing Coil	
⚠	RCiLH0012KJZZ		Deflection Yoke	
	PMAGF3092CEZZ	R	Magnet	AL
	PMAGG3002CEZZ	R	Magnet	AC
⚠	QEARC2517CEZZ	R	Grounding Strap	AK
	PSPAG0003PEZZ	R	Spacer	AD
	PSPAH0035KJ00		Spacer	

PRINTED WIRING BOARD ASSEMBLIES

(NOT REPLACEMENT ITEM)

PWB-A	DUNTKA122FMX1	–	MAIN Unit	—
PWB-B	DUNTKA123FMW6	–	POWER Unit	—
PWB-C	DUNTKA075FMX3	–	CRT Unit	—
PWB-D	DUNTKA429WEV0	–	OPERATION Unit	—

PWB-A DUNTKA122FMX1 MAIN UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

⚠ TU200	VTUVTST5HD970		VHF Tuner	

INTEGRATED CIRCUITS

IC300	VHiAN5891K+-1	R	AN5891K	AQ
IC301	VHiBH3543F+-1	R	BH3543F-E2	AE
IC400	VHiCXA2089Q-1	R	CXA2089Q	AN
IC600	VHiKA7805AP-1	R	KA7805AP	AE
IC601	VHiKA7809AP-1	R	KA7809AP	AE
IC602	VHiKA78S09P-1	R	KA78S09P	AD
IC605	VHiM51497L/-1	R	M51497L	AL
IC800	RH-iX3395CEN2	R	I.C.	AY
IC1000	RH-iX3422CEZZ		M37221MA-204SP	
IC1001	VHiM24C08B/-1	R	M24C08-BN6	AM
IC1002	VHiMM1437BF-1	R	I.C.	AF
IC1300	VHiAN5277//-1	R	AN5277	AN
IC5400	VHiTDA9181T-1*	R	TDA9181T	AU

TRANSISTORS

Q200	VS2SC2735//1E	R	VS2SC2735	AC
Q201	VS2SC2735//1E	R	VS2SC2735	AC
Q316	VS2SB709A//-1	R	VS2SB709A	AA
Q400	VS2SD601A//-1	R	VS2SD601A	AC
Q401	VS2SD601A//-1	R	VS2SD601A	AC
Q402	VS2SD601A//-1	R	VS2SD601A	AC
Q409	VS2SD601A//-1	R	VS2SD601A	AC
Q410	VSiMZ1A////-1	R	VSIMZ1A	AC
Q450	VS2SB709A//-1	R	VS2SB709A	AA
Q451	VS2SD601A//-1	R	VS2SD601A	AC
Q452	VS2SD601A//-1	R	VS2SD601A	AC
Q453	VS2SD601A//-1	R	VS2SD601A	AC
Q454	VS2SD601A//-1	R	VS2SD601A	AC
Q455	VS2SD601A//-1	R	VS2SD601A	AC
Q600	VS2SD601A//-1	R	VS2SD601A	AC
Q620	VS2SB709A//-1	R	VS2SB709A	AA
Q800	VS2SB709A//-1	R	VS2SB709A	AA
Q1000	VS2SD601A//-1	R	VS2SD601A	AC
Q1001	VS2SD601A//-1	R	VS2SD601A	AC
Q1002	VS2SD601A//-1	R	VS2SD601A	AC
Q1004	VS2SB709A//-1	R	VS2SB709A	AA
Q1066	VS2SD601A//-1	R	VS2SD601A	AC
Q1300	VS2SB709A//-1	R	VS2SB709A	AA
Q1301	VS2SD601A//-1	R	VS2SD601A	AC
Q1320	VS2SD601A//-1	R	VS2SD601A	AC
Q1321	VS2SD601A//-1	R	VS2SD601A	AC
Q1322	VS2SB709A//-1	R	VS2SB709A	AA
Q1325	VS2SD601A//-1	R	VS2SD601A	AC
Q1401	VS2SD601A//-1	R	VS2SD601A	AC
Q1402	VS2SD601A//-1	R	VS2SD601A	AC
Q1403	VS2SB709A//-1	R	VS2SB709A	AA
Q1404	VS2SD601A//-1	R	VS2SD601A	AC
Q1405	VS2SB709A//-1	R	VS2SB709A	AA
Q5400	VS2SD601A//-1	R	VS2SD601A	AC
Q5401	VS2SD601A//-1	R	VS2SD601A	AC
Q5402	VS2SB709A//-1	R	VS2SB709A	AA
Q5403	VS2SD601A//-1	R	VS2SD601A	AC
Q5404	VS2SB709A//-1	R	VS2SB709A	AA
Q5406	VS2SD601A//-1	R	VS2SD601A	AC

DIODES AND LED'S

D201	VHD1SS390++-1	R	1SS390++	AB
D202	RH-EX0619GEZZ	R	Zener Diode	AA
D203	RH-EX0619GEZZ	R	Zener Diode	AA
D300	RH-EX0619GEZZ	R	Zener Diode	AA
D301	RH-EX0619GEZZ	R	Zener Diode	AA
D302	RH-DX0475CEZZ	R	Diode	AB
D316	RH-DX0475CEZZ	R	Diode	AB
D400	RH-EX0631GEZZ	R	Zener Diode	AA
D401	RH-EX0631GEZZ	R	Zener Diode	AA
D402	RH-EX0631GEZZ	R	Zener Diode	AA
D403	RH-EX0631GEZZ	R	Zener Diode	AA
D404	RH-EX0631GEZZ	R	Zener Diode	AA
D405	RH-EX0619GEZZ	R	Zener Diode	AA
D450	RH-DX0475CEZZ	R	Diode	AB
D451	RH-EX0621GEZZ	R	Zener Diode	AB
D455	RH-EX0631GEZZ	R	Zener Diode	AA
D456	RH-EX0631GEZZ	R	Zener Diode	AA
D457	RH-EX0631GEZZ	R	Zener Diode	AA
D458	RH-EX0631GEZZ	R	Zener Diode	AA
D602	RH-DX0475CEZZ	R	Diode	AB
D603	RH-DX0475CEZZ	R	Diode	AB
D605	RH-DX0475CEZZ	R	Diode	AB
D620	RH-DX0475CEZZ	R	Diode	AB
D621	RH-DX0475CEZZ	R	Diode	AB
D622	RH-DX0475CEZZ	R	Diode	AB
D625	RH-DX0475CEZZ	R	Diode	AB
D626	RH-EX0610GEZZ	R	Zener Diode	AA
D1000	RH-EX0619GEZZ	R	Zener Diode	AA
D1001	RH-EX0619GEZZ	R	Zener Diode	AA
D1002	RH-EX0619GEZZ	R	Zener Diode	AA
D1003	RH-EX0619GEZZ	R	Zener Diode	AA
D1004	RH-EX0619GEZZ	R	Zener Diode	AA
D1005	RH-EX0619GEZZ	R	Zener Diode	AA
D1006	RH-EX0619GEZZ	R	Zener Diode	AA
D1007	RH-EX0619GEZZ	R	Zener Diode	AA
D1008	RH-EX0619GEZZ	R	Zener Diode	AA

Ref. No.	Part No.	★	Description	Code
PWB-A	**DUNTKA122FMX1 MAIN UNIT (Continued)**			
D1009	RH-EX0619GEZZ	R	Zener Diode	AA
D1010	RH-EX0619GEZZ	R	Zener Diode	AA
D1011	RH-EX0619GEZZ	R	Zener Diode	AA
D1012	RH-EX0619GEZZ	R	Zener Diode	AA
D1015	RH-EX0619GEZZ	R	Zener Diode	AA
D1016	RH-EX0619GEZZ	R	Zener Diode	AA
D1017	RH-DX0475CEZZ	R	Diode	AB
D1302	RH-DX0475CEZZ	R	Diode	AB
D1303	RH-DX0475CEZZ	R	Diode	AB
D1304	RH-DX0475CEZZ	R	Diode	AB
D1320	RH-DX0475CEZZ	R	Diode	AB
D1321	RH-DX0475CEZZ	R	Diode	AB
	PACKAGED CIRCUIT			
X800	RCRSB0278CEZZ	R	Crystal	AG
	FILTERS			
CF201	RFiLC0085CEZZ	R	Filter	AG
CF401	RFiLC0463CEZZ	R	Filter	AD
CF1000	RFiLA0084CEZZ	R	Filter	AE
CF1001	RFiLA0020CEZZ	R	Filter	AD
SF200	RFiLC0444CEZZ	R	Filter	AN
SF201	RFiLC0445CEZZ	R	Filter	AM
	COILS AND TRANSFORMERS			
L200	VP-DF270K0000	R	Peaking 27µH	AB
L201	VP-DF270K0000	R	Peaking 27µH	AB
L202	VP-DF120K0000	R	Peaking 12µH	AB
L203	VP-XF1R2K0000	R	Peaking 1.2µH	AB
L205	VP-XF1R2K0000	R	Peaking 1.2µH	AB
L401	VP-XF120K0000	R	Peaking 12µH	AB
L600	VP-DF120K0000	R	Peaking 12µH	AB
L800	VP-DF120K0000	R	Peaking 12µH	AB
L801	VP-DF6R8K0000	R	Peaking 6.8µH	AB
L1002	VP-XF1R0K0000	R	Peaking 1µH	AB
L5400	VP-XF100K0000	R	Peaking 10µH	AB
L5403	VP-XF120K0000	R	Peaking 12µH	AB
L5404	VP-XF120K0000	R	Peaking 12µH	AB
T800	RCiLD0005PEZZ	R	Detection Coil	AF
	CAPACITORS			
C201	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C202	VCEA0A0JW228M	R	2200 6.3V Electrolytic	AD
C203	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C204	VCEA0A1HW106M	R	10 50V Electrolytic	AB
C205	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C206	VCEA0A0JW228M	R	2200 6.3V Electrolytic	AD
C207	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C210	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C211	VCEA0A1HW225M	R	2.2 50V Electrolytic	AB
C212	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C213	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C214	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C215	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C216	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C217	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C218	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C219	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C220	VCEA0A1HW224M	R	0.22 50V Electrolytic	AB
C221	VCQYTA1HM102K	R	1000p 50V Mylar	AA
C222	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C223	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C226	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C227	VCEA0A1HW475M	R	4.7 50V Electrolytic	AB
C231	VCCCCY1HH3R0C	R	3.0p 50V Ceramic	AA
C234	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C300	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C302	VCKYCY1HF183Z	R	0.018 50V Ceramic	AA
C303	VCEA0A1HW475M	R	4.7 50V Electrolytic	AB
C304	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C305	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C306	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C307	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C308	VCKYCY1HB472K	R	4700p 50V Ceramic	AA
C309	VCKYCY1HB472K	R	4700p 50V Ceramic	AA
C319	VCKYCY1CB333K	R	0.033 16V Ceramic	AA
C320	VCKYCY1CB333K	R	0.033 16V Ceramic	AA
C321	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C322	VCQYTA1HM333K	R	0.033 50V Mylar	AA
C323	VCQYTA1HM333K	R	0.033 50V Mylar	AA
C326	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C327	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C331	VCQYTA1HM103K	R	0.01 50V Mylar	AB
C332	VCEA0A1HW104M	R	0.1 50V Electrolytic	AB
C333	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C334	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C335	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C336	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C337	VCQYTA1HM103K	R	0.01 50V Mylar	AB
C338	VCEA0A1HW104M	R	0.1 50V Electrolytic	AB
C339	VCFYFA1HA684J	R	0.68 50V M.Polypro	AD
C340	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C341	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C342	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C343	VCEA0A1CW107M	R	100 16V Electrolytic	AC
C349	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C350	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C352	VCEA0A1CW476M	R	47 16V Electrolytic	AB
C353	VCEA0A1CW337M	R	330 16V Electrolytic	AC
C354	VCEA0A1CW337M	R	330 16V Electrolytic	AC
C355	VCEA0A0JW227M	R	220 6.3V Electrolytic	AB
C356	VCEA0A0JW477M	R	470 6.3V Electrolytic	AC
C357	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C358	VCQYTA1HM153K	R	0.015 50V Mylar	AA
C360	VCQYTA1HM393K	R	0.039 50V Mylar	AB
C400	VCEA0A1CW107M	R	100 16V Electrolytic	AC
C401	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C402	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB
C403	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C404	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C405	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C406	VCE9GA1CW106M	R	10 16V Elect.(N.P)	AB
C407	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C424	VCEA0A1CW477M	R	470 16V Electrolytic	AC
C425	VCEA0A1CW476M	R	47 16V Electrolytic	AB
C426	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C427	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C428	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C429	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C430	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C431	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C432	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C433	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C434	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C435	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C436	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C437	VCEA0A1CW476M	R	47 16V Electrolytic	AB
C438	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C439	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C450	VCKYCY1HB103K	R	0.01 50V Ceramic	AA
C451	VCEA0A1HW474M	R	0.47 50V Electrolytic	AB
C452	VCFYFA1HA334J	R	0.33 50V Mylar	AB
C453	VCEA0A1CW226M	R	22 16V Electrolytic	AB
C454	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C455	VCEA0A1HW105M	R	1 50V Electrolytic	AB
C456	VCEA0A1HW224M	R	0.22 50V Electrolytic	AB
C457	VCKYCY1CF104Z	R	0.1 16V Ceramic	AA
C458	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C459	VCEA0A1CW107M	R	100 16V Electrolytic	AC
C460	VCKYCY1HB822K	R	8200p 50V Ceramic	AB
C461	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C462	VCCCCY1HH561J	R	560p 50V Ceramic	AB
C463	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C468	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA
C469	VCEA0A1HW105M	R	1 50V Electrolytic	AB
C478	VCKYCY1HB152K	R	1500p 50V Ceramic	AA
C500	VCKYCY1HB222K	R	2200p 50V Ceramic	AA

Ref. No.	Part No.	★			Description	Code
PWB-A	**DUNTKA122FMX1 MAIN UNIT (Continued)**					
C501	VCEACA1HC224M	R	0.22	50V	Electrolytic	AC
C505	VCFPVC2DB474J	R	0.47	200V	M.Polypro	AE
C600	VCEA0A1HW474M	R	0.47	50V	Electrolytic	AB
C601	VCKYCY1HB822K	R	8200p	50V	Ceramic	AB
C602	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C603	VCEA0A1CW228M	R	2200	16V	Electrolytic	AD
C605	VCQYTA1HM152J	R	1500p	50V	Mylar	AA
C620	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C621	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C622	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C623	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C624	VCKYCY1CF334Z	R	0.33	16V	Ceramic	AA
C625	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C630	VCE9GA1CW106M	R	10	16V	Elect.(N.P)	AB
C631	VCEA0A1HW224M	R	0.22	50V	Electrolytic	AB
C632	VCKYCY1HB102K	R	1000p	50V	Ceramic	AA
C633	VCQYTA1HM182K	R	1800p	50V	Mylar	AA
C634	VCEA0A1HW224M	R	0.22	50V	Electrolytic	AB
C635	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C636	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C637	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C638	VCQYTA1HM473J	R	0.047	50V	Mylar	AA
C639	VCKYCY1HB392K	R	3900p	50V	Ceramic	AA
C640	VCKYCY1HB222K	R	2200p	50V	Ceramic	AA
C800	VCKYCY1HB222K	R	2200p	50V	Ceramic	AA
C801	VCEA0A1HW224M	R	0.22	50V	Electrolytic	AB
C802	VCCCCY1HH100D	R	10p	50V	Ceramic	AA
C803	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C804	VCEA0A1CW107M	R	100	16V	Electrolytic	AC
C805	VCKYCY1CF104Z	R	0.1	16V	Ceramic	AA
C806	VCKYCY1CF104Z	R	0.1	16V	Ceramic	AA
C807	VCKYCY1CF104Z	R	0.1	16V	Ceramic	AA
C808	VCCCCY1HH470J	R	47p	50V	Ceramic	AA
C809	VCCCCY1HH470J	R	47p	50V	Ceramic	AA
C810	VCCCCY1HH470J	R	47p	50V	Ceramic	AA
C812	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C813	VCEA0A1CW107M	R	100	16V	Electrolytic	AC
C815	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1000	VCCCCY1HH560J	R	56p	50V	Ceramic	AA
C1001	VCKYCY1HB222K	R	2200p	50V	Ceramic	AA
C1002	VCEA0A1HW104M	R	0.1	50V	Electrolytic	AB
C1003	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C1004	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C1005	VCEA0A0JW107M	R	100	6.3V	Electrolytic	AB
C1006	VCKYCY1CF334Z	R	0.33	16V	Ceramic	AA
C1007	VCKYCY1CF334Z	R	0.33	16V	Ceramic	AA
C1008	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C1009	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C1010	VCEA0A0JW107M	R	100	6.3V	Electrolytic	AB
C1011	VCCCCY1HH220J	R	22p	50V	Ceramic	AA
C1012	VCCCCY1HH220J	R	22p	50V	Ceramic	AA
C1013	VCCCCY1HH220J	R	22p	50V	Ceramic	AA
C1014	VCCCCY1HH220J	R	22p	50V	Ceramic	AA
C1015	VCEA0A1HW105M	R	1	50V	Electrolytic	AB
C1019	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C1020	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C1026	VCKYCY1CF334Z	R	0.33	16V	Ceramic	AA
C1051	VCQYTA1HM103K	R	0.01	50V	Mylar	AB
C1052	VCEA0A1CW107M	R	100	16V	Electrolytic	AC
C1066	VCEA0A1HW105M	R	1	50V	Electrolytic	AB
C1090	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1300	VCEA0A1EW227M	R	220	25V	Electrolytic	AB
C1301	VCEA0A1HW105M	R	1	50V	Electrolytic	AB
C1302	VCEA0A1HW105M	R	1	50V	Electrolytic	AB
C1303	VCQYTA1HM332K	R	3300p	50V	Mylar	AB
C1304	VCQYTA1HM332K	R	3300p	50V	Mylar	AB
C1305	VCEA0A1EW108M	R	1000	25V	Electrolytic	AD
C1306	VCEA0A1EW108M	R	1000	25V	Electrolytic	AD
C1307	VCEA0A1CW227M	R	220	16V	Electrolytic	AC
C1308	VCEA0H1VW478M	R	4700	35V	Electrolytic	AL
C1309	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1310	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1311	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1312	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1313	VCEA0A1EW227M	R	220	25V	Electrolytic	AB
C1320	VCKYCY1HB102K	R	1000p	50V	Ceramic	AA
C1321	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1322	VCKYCY1HB102K	R	1000p	50V	Ceramic	AA
C1323	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1324	VCKYCY1HB102K	R	1000p	50V	Ceramic	AA
C1325	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1326	VCKYCY1HB102K	R	1000p	50V	Ceramic	AA
C1327	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1328	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1329	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1330	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1331	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1332	VCEA0A1AW227M	R	220	10V	Electrolytic	AB
C1333	VCKYCY1HB102K	R	1000p	50V	Ceramic	AA
C1334	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1335	VCKYCY1HB102K	R	1000p	50V	Ceramic	AA
C1336	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1401	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C1402	VCEA0A1HW225M	R	2.2	50V	Electrolytic	AB
C1403	VCKYCY1HB332K	R	3300p	50V	Ceramic	AA
C5400	VCKYCY1CF104Z	R	0.1	16V	Ceramic	AA
C5401	VCKYCY1CF104Z	R	0.1	16V	Ceramic	AA
C5402	VCKYCY1CF104Z	R	0.1	16V	Ceramic	AA
C5403	VCKYCY1CF104Z	R	0.1	16V	Ceramic	AA
C5407	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C5408	VCEA0A1CW107M	R	100	16V	Electrolytic	AC
C5409	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C5410	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA
C5411	VCEA0A1CW107M	R	100	16V	Electrolytic	AC
C5413	VCKYCY1HF103Z	R	0.01	50V	Ceramic	AA

RESISTORS

RJ5	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ6	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ8	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ11	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ12	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ13	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ14	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ15	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ17	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ18	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ19	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ26	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ28	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ29	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ30	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ32	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ33	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ34	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ36	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ37	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ38	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ39	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ41	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ42	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ45	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ46	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ48	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ49	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ50	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ52	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ53	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ54	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ55	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ56	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ57	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ58	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ59	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ60	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ61	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ62	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ63	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA
RJ64	VRS-CY1JF000J	R	0	1/16W	Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
PWB-A	**DUNTKA122FMX1 MAIN UNIT (Continued)**			
RJ66	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ69	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ70	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ71	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ72	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ73	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ74	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ76	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ77	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ78	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ79	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ80	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ81	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ91	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ92	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ93	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ94	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ95	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ96	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ97	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ98	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ99	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ100	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ101	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ102	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
RJ103	VRS-CY1JF000J	R 0	1/16W Metal Oxide	AA
R200	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R201	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R205	VRS-CY1JF122J	R 1.2k	1/16W Metal Oxide	AA
R206	VRS-CY1JF392J	R 3.9k	1/16W Metal Oxide	AA
R207	VRS-CY1JF122J	R 1.2k	1/16W Metal Oxide	AA
R208	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R209	VRS-CY1JF392J	R 3.9k	1/16W Metal Oxide	AA
R210	VRS-CY1JF680J	R 68	1/16W Metal Oxide	AA
R211	VRS-CY1JF122J	R 1.2k	1/16W Metal Oxide	AA
R212	VRS-CY1JF122J	R 1.2k	1/16W Metal Oxide	AA
R213	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R214	VRS-CY1JF682J	R 6.8k	1/16W Metal Oxide	AA
R215	VRS-CY1JF222J	R 2.2k	1/16W Metal Oxide	AA
R216	VRS-CY1JF222J	R 2.2k	1/16W Metal Oxide	AA
R221	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R222	VRD-RA2BE333J	R 33k	1/8W Carbon	AA
R223	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R224	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R225	VRD-RA2BE102J	R 1k	1/8W Carbon	AA
R227	VRS-CY1JF680J	R 68	1/16W Metal Oxide	AA
R316	VRD-RA2BE333J	R 33k	1/8W Carbon	AA
R333	VRS-CY1JF222J	R 2.2k	1/16W Metal Oxide	AA
R334	VRS-CY1JF821J	R 820	1/16W Metal Oxide	AA
R335	VRS-CY1JF224J	R 220k	1/16W Metal Oxide	AA
R337	VRS-CY1JF821J	R 820	1/16W Metal Oxide	AA
R338	VRS-CY1JF222J	R 2.2k	1/16W Metal Oxide	AA
R339	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R340	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R341	VRS-CY1JF471J	R 470	1/16W Metal Oxide	AA
R343	VRS-CY1JF471J	R 470	1/16W Metal Oxide	AA
R345	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R364	VRD-RM2HD101J	R 100	1/2W Carbon	AA
R381	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R382	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R400	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R401	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R402	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R403	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R404	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R405	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R406	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R407	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R408	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R409	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R410	VRD-RA2BE100J	R 10	1/8W Carbon	AA
R423	VRS-CY1JF271J	R 270	1/16W Metal Oxide	AA
R425	VRS-CY1JF331J	R 330	1/16W Metal Oxide	AA
R434	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R435	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R436	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R437	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R438	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R439	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R440	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R441	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R442	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R443	VRD-RA2BE151J	R 150	1/8W Carbon	AA
R444	VRD-RA2BE102J	R 1k	1/8W Carbon	AA
R445	VRS-CY1JF123J	R 12k	1/16W Metal Oxide	AA
R446	VRS-CY1JF123J	R 12k	1/16W Metal Oxide	AA
R447	VRS-CY1JF223J	R 22k	1/16W Metal Oxide	AA
R448	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R449	VRS-CY1JF471J	R 470	1/16W Metal Oxide	AA
R450	VRD-RA2BE750J	R 75	1/8W Carbon	AA
R451	VRS-CY1JF562J	R 5.6k	1/16W Metal Oxide	AA
R452	VRS-CY1JF223J	R 22k	1/16W Metal Oxide	AA
R453	VRD-RM2HD680J	R 68	1/2W Carbon	AA
R454	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R455	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R456	VRS-CY1JF224J	R 220k	1/16W Metal Oxide	AA
R457	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R458	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R459	VRS-CY1JF223J	R 22k	1/16W Metal Oxide	AA
R460	VRS-CY1JF821J	R 820	1/16W Metal Oxide	AA
R461	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R462	VRS-CY1JF471J	R 470	1/16W Metal Oxide	AA
R463	VRS-CY1JF471J	R 470	1/16W Metal Oxide	AA
R464	VRS-CY1JF393J	R 39k	1/16W Metal Oxide	AA
R465	VRS-CY1JF182J	R 1.8k	1/16W Metal Oxide	AA
R466	VRS-CY1JF820J	R 82	1/16W Metal Oxide	AA
R467	VRS-CY1JF393J	R 39k	1/16W Metal Oxide	AA
R468	VRS-CY1JF273J	R 27k	1/16W Metal Oxide	AA
R469	VRD-RA2EE471J	R 470	1/4W Carbon	AA
R470	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R471	VRS-CY1JF272J	R 2.7k	1/16W Metal Oxide	AA
R472	VRS-CY1JF821J	R 820	1/16W Metal Oxide	AA
R473	VRD-RA2BE100J	R 10	1/8W Carbon	AA
R474	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R475	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R477	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R478	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R479	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R480	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R481	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R482	VRS-CY1JF750J	R 75	1/16W Metal Oxide	AA
R483	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R484	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R485	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R486	VRS-CY1JF151J	R 150	1/16W Metal Oxide	AA
R487	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R488	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R500	VRS-CY1JF562F	R 5.6k	1/16W Metal Oxide	AA
R504	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R600	VRD-RA2BE153J	R 15k	1/8W Carbon	AA
R601	VRS-CY1JF822J	R 8.2k	1/16W Metal Oxide	AA
R602	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R603	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R604	VRS-CY1JF224J	R 220k	1/16W Metal Oxide	AA
R605	VRD-RA2BE474J	R 470k	1/8W Carbon	AA
R606	VRD-RA2EE395J	R 3.9M	1/4W Carbon	AA
R608	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R609	VRS-CY1JF222J	R 2.2k	1/16W Metal Oxide	AA
R610	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R613	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R614	VRD-RA2BE103J	R 10k	1/8W Carbon	AA
R620	VRS-VV3AB470J	R 47	1W Metal Oxide	AA
R621	VRS-VV3AB470J	R 47	1W Metal Oxide	AA
R623	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R624	VRD-RA2BE103J	R 10k	1/8W Carbon	AA
R625	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R626	VRS-CY1JF472J	R 4.7k	1/16W Metal Oxide	AA
R627	VRS-CY1JF184J	R 180k	1/16W Metal Oxide	AA
R628	VRS-CY1JF471J	R 470	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description			Code
PWB-A	**DUNTKA122FMX1 MAIN UNIT (Continued)**					
R629	VRS-CY1JF271J	R	270	1/16W	Metal Oxide	AA
R630	VRS-CY1JF271J	R	270	1/16W	Metal Oxide	AA
R631	VRS-CY1JF563J	R	56k	1/16W	Metal Oxide	AA
R632	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R633	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R634	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R635	VRS-CY1JF684J	R	680k	1/16W	Metal Oxide	AA
R639	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R641	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R800	VRS-CY1JF333J	R	33k	1/16W	Metal Oxide	AA
R801	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R802	VRS-CY1JF272J	R	2.7k	1/16W	Metal Oxide	AA
R803	VRS-CY1JF561J	R	560	1/16W	Metal Oxide	AA
R804	VRS-CY1JF561J	R	560	1/16W	Metal Oxide	AA
R805	VRS-CY1JF561J	R	560	1/16W	Metal Oxide	AA
R806	VRS-CY1JF272J	R	2.7k	1/16W	Metal Oxide	AA
R807	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R808	VRS-CY1JF272J	R	2.7k	1/16W	Metal Oxide	AA
R809	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R810	VRS-CY1JF272J	R	2.7k	1/16W	Metal Oxide	AA
R811	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R820	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R821	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R822	VRS-CY1JF221J	R	220	1/16W	Metal Oxide	AA
R823	VRS-CY1JF221J	R	220	1/16W	Metal Oxide	AA
R824	VRS-CY1JF221J	R	220	1/16W	Metal Oxide	AA
R825	VRS-CY1JF221J	R	220	1/16W	Metal Oxide	AA
R826	VRS-CY1JF471J	R	470	1/16W	Metal Oxide	AA
R828	VRD-RA2BE271J	R	270	1/8W	Carbon	AA
R1000	VRS-CY1JF333J	R	33k	1/16W	Metal Oxide	AA
R1001	VRS-CY1JF562J	R	5.6k	1/16W	Metal Oxide	AA
R1002	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1003	VRS-CY1JF562J	R	5.6k	1/16W	Metal Oxide	AA
R1004	VRS-CY1JF333J	R	33k	1/16W	Metal Oxide	AA
R1005	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1006	VRS-CY1JF562J	R	5.6k	1/16W	Metal Oxide	AA
R1007	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1008	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1009	VRS-CY1JF562J	R	5.6k	1/16W	Metal Oxide	AA
R1010	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1011	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1013	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1018	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1019	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1020	VRD-RA2BE562J	R	5.6k	1/8W	Carbon	AA
R1021	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1022	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1023	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1025	VRS-CY1JF563J	R	56k	1/16W	Metal Oxide	AA
R1026	VRS-CY1JF563J	R	56k	1/16W	Metal Oxide	AA
R1028	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R1029	VRS-CY1JF222J	R	2.2k	1/16W	Metal Oxide	AA
R1030	VRD-RA2BE563J	R	56k	1/8W	Carbon	AA
R1031	VRD-RA2BE563J	R	56k	1/8W	Carbon	AA
R1032	VRS-CY1JF563J	R	56k	1/16W	Metal Oxide	AA
R1033	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1034	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1035	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1036	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1037	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1039	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1040	VRS-CY1JF332J	R	3.3k	1/16W	Metal Oxide	AA
R1041	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1042	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1043	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1044	VRS-CY1JF332J	R	3.3k	1/16W	Metal Oxide	AA
R1045	VRS-CY1JF563J	R	56k	1/16W	Metal Oxide	AA
R1046	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1047	VRS-CY1JF563J	R	56k	1/16W	Metal Oxide	AA
R1048	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1049	VRS-CY1JF332J	R	3.3k	1/16W	Metal Oxide	AA
R1050	VRS-CY1JF332J	R	3.3k	1/16W	Metal Oxide	AA
R1051	VRS-CY1JF332J	R	3.3k	1/16W	Metal Oxide	AA
R1052	VRS-CY1JF332J	R	3.3k	1/16W	Metal Oxide	AA
R1053	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1056	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1060	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R1061	VRS-CY1JF561J	R	560	1/16W	Metal Oxide	AA
R1062	VRS-CY1JF562J	R	5.6k	1/16W	Metal Oxide	AA
R1067	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R1090	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R1301	VRS-CY1JF182J	R	1.8k	1/16W	Metal Oxide	AA
R1302	VRS-CY1JF182J	R	1.8k	1/16W	Metal Oxide	AA
R1303	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R1304	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R1305	VRS-CY1JF224J	R	220k	1/16W	Metal Oxide	AA
R1306	VRD-RA2BE222J	R	2.2k	1/8W	Carbon	AA
R1307	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R1308	VRS-CY1JF122J	R	1.2k	1/16W	Metal Oxide	AA
R1309	VRN-VV3DBR68J	R	0.68	2W	Metal Film	AA
R1313	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1314	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R1315	VRD-RA2BE822J	R	8.2k	1/8W	Carbon	AA
R1320	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1321	VRS-CY1JF564J	R	560k	1/16W	Metal Oxide	AA
R1322	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1323	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1324	VRS-CY1JF564J	R	560k	1/16W	Metal Oxide	AA
R1325	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1326	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1327	VRS-CY1JF564J	R	560k	1/16W	Metal Oxide	AA
R1328	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1329	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1330	VRS-CY1JF564J	R	560k	1/16W	Metal Oxide	AA
R1331	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1332	VRS-CY1JF104J	R	100k	1/16W	Metal Oxide	AA
R1333	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1334	VRD-RA2BE561J	R	560	1/8W	Carbon	AA
R1335	VRS-CY1JF473J	R	47k	1/16W	Metal Oxide	AA
R1336	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1337	VRS-CY1JF104J	R	100k	1/16W	Metal Oxide	AA
R1338	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1339	VRD-RA2BE561J	R	560	1/8W	Carbon	AA
R1340	VRS-CY1JF473J	R	47k	1/16W	Metal Oxide	AA
R1341	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1342	VRD-RA2BE223J	R	22k	1/8W	Carbon	AA
R1343	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1344	VRS-CY1JF564J	R	560k	1/16W	Metal Oxide	AA
R1345	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1346	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1347	VRS-CY1JF564J	R	560k	1/16W	Metal Oxide	AA
R1348	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1355	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1401	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R1403	VRS-CY1JF181J	R	180	1/16W	Metal Oxide	AA
R1404	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R1405	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R1406	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R1407	VRS-CY1JF561J	R	560	1/16W	Metal Oxide	AA
R1408	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1409	VRS-CY1JF222J	R	2.2k	1/16W	Metal Oxide	AA
R1410	VRS-CY1JF471J	R	470	1/16W	Metal Oxide	AA
R1411	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R1412	VRS-CY1JF824J	R	820k	1/16W	Metal Oxide	AA
R1413	VRS-CY1JF682J	R	6.8k	1/16W	Metal Oxide	AA
R1414	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R5400	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R5401	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R5402	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R5403	VRS-CY1JF103J	R	10k	1/16W	Metal Oxide	AA
R5404	VRS-CY1JF101J	R	100	1/16W	Metal Oxide	AA
R5405	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R5408	VRS-CY1JF473J	R	47k	1/16W	Metal Oxide	AA
R5409	VRS-CY1JF223J	R	22k	1/16W	Metal Oxide	AA
R5410	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R5411	VRS-CY1JF122J	R	1.2k	1/16W	Metal Oxide	AA
R5412	VRS-CY1JF152J	R	1.5k	1/16W	Metal Oxide	AA
R5413	VRS-CY1JF102J	R	1k	1/16W	Metal Oxide	AA
R5414	VRD-RA2BE101J	R	100	1/8W	Carbon	AB

Ref. No.	Part No.	★	Description	Code
PWB-A	**DUNTKA122FMX1 MAIN UNIT (Continued)**			
R5415	VRS-CY1JF101J	R	100 1/16W Metal Oxide	AA
R5416	VRS-CY1JF563J	R	56k 1/16W Metal Oxide	AA
R5417	VRS-CY1JF273J	R	27k 1/16W Metal Oxide	AA
R5418	VRS-CY1JF221J	R	220 1/16W Metal Oxide	AA
R5419	VRS-CY1JF102J	R	1k 1/16W Metal Oxide	AA
R5420	VRS-CY1JF221J	R	220 1/16W Metal Oxide	AA
R5421	VRS-CY1JF102J	R	1k 1/16W Metal Oxide	AA
R5423	VRS-CY1JF473J	R	47k 1/16W Metal Oxide	AA
R5424	VRS-CY1JF473J	R	47k 1/16W Metal Oxide	AA
	MISCELLANEOUS PARTS			
J200	QCNW-0031KJZZ		Connecting Cord	
J400	QTANJ0967CEZZ	R	Terminal	AP
J401	QTANJ0527CEZZ	R	Terminal	AL
P500	QPLGN0261CEZZ	R	Plug, 2pin(G4)	AB
P800	QPLGN0841CEZZ	R	Plug, 8pin(KY)	AB
P1000	QPLGN0661CEZZ	R	Plug, 6pin(BC)	AD
P1300	QPLGN0461CEZZ	R	Plug, 4pin(SS)	AB
P1303	QPLGN0361CEZZ	R	Plug, 3pin(SA)	AB
SC400	QSOCD0430CEZZ	R	Socket	AE
SC801	QSOCZ1040CEZZ	R	Socket, 10pin(XD)	AD
SC1000	QSOCZ1040CEZZ	R	Socket, 10pin(XA)	AD
SC1001	QSOCZ1040CEZZ	R	Socket, 10pin(XB	AD
SC1002	QSOCN1895REZZ	R	Socket, 18pin(RC)	AC
SLD1001	PSLDM0233PEFW	R	Shield for IC1000	AC
RDA601	PRDAR0259PEFW	R	Heat Sink for IC601	AE
RDA1300	PRDAR0299PEFW	R	Heat Sink for IC1300	AH
TP201	QLUGP0102PEZZ	R	Lug	AA
TP801	QLUGP0102PEZZ	R	Lug	AA
TP802	QLUGP0102PEZZ	R	Lug	AA
TP803	QLUGP0102PEZZ	R	Lug	AA
TP1300	QLUGP0102PEZZ	R	Lug	AA
PWB-B	**DUNTKA123FMW6 POWER UNIT**			
	INTEGRATED CIRCUITS			
IC700	VHiTDA16846-1	R	TDA16846	AN
IC750	VHiSE120N//-1	R	SE120N	AG
IC1501	VHiTA8427K/-1	R	TA8427K	AL
IC1680	VHiKiA358P+-1		I.C.	
IC1700	VHiMiP0253/-1	R	MIP0253SP	AM
IC1751	RH-iX0037CEZZ	R	UPC574J	AF
	TRANSISTORS			
Q700	VSSPP11N60C-1	R	SPP11N60C	AR
Q701	VS2SC3198-Y-1	R	2SC3198-Y	AA
Q750	VS2SC3198-Y-1	R	2SC3198-Y	AA
Q751	VS2SA1266-Y-1	R	2SA1266-Y	AA
Q752	VS2SC3198-G-1	R	2SC3198-G	AA
Q753	VS2SC1959Y/1E	R	2SC1959Y	AC
Q1534	VS2SC3198-Y-1	R	2SC3198-Y	AA
⚠ Q1604	VS2SC3198-Y-1	R	2SC3198-Y	AA
Q1622	VS2SC3207//-1	R	2SC3207	AC
⚠ Q1630	VS2SD2581++2E	R	2SD2581++	AM
Q1670	VS2SA1266-Y-1	R	2SA1266-Y	AA
Q1671	VS2SD1830//1E	R	2SD1830	AF
	DIODES AND LED'S			
D700	RH-DX0336CEZZ	R	Diode	AH
D701	RH-DX0130CEZZ	R	Diode	AE
D702	RH-DX0321CEZZ	R	Diode	AC
D703	RH-DX0130CEZZ	R	Diode	AE
D704	RH-EX0636GEZZ	R	Zener Diode	AC
D705	RH-DX0475CEZZ	R	Diode	AB
D707	RH-DX0475CEZZ	R	Diode	AB
D750	RH-DX0475CEZZ	R	Diode	AB
D751	RH-DX0243CEZZ	R	Diode	AF
D752	RH-DX0373CEZZ	R	Diode	AC
D753	RH-DX0373CEZZ	R	Diode	AC
D754	RH-DX0452CEZZ	R	Diode	AH
D755	RH-DX0475CEZZ	R	Diode	AB
D756	RH-EX0152CEZZ	R	Zener Diode	AE
D757	RH-EX0643GEZZ	R	Zener Diode	AB
D758	RH-DX0475CEZZ	R	Diode	AB
D759	RH-DX0475CEZZ	R	Diode	AB
D760	RH-DX0475CEZZ	R	Diode	AB
D761	RH-DX0475CEZZ	R	Diode	AB
D1534	RH-DX0279CEZZ	R	Diode	AB
D1535	RH-EX0665GEZZ	R	Zener Diode	AA
D1576	RH-DX0127CEZZ	R	Diode	AC
D1620	RH-DX0475CEZZ	R	Diode	AB
⚠ D1621	RH-EX0655GEZZ	R	Zener Diode	AB
D1631	RH-DX0449CEZZ	R	Diode	AK
D1651	RH-DX0302CEZZ	R	Diode	AC
D1659	RH-DX0130CEZZ	R	Diode	AE
D1664	RH-EX0631GEZZ	R	Zener Diode	AA
D1700	RH-DX0279CEZZ	R	Diode	AB
D1701	RH-DX0279CEZZ	R	Diode	AB
D1702	RH-DX0279CEZZ	R	Diode	AB
D1703	RH-DX0279CEZZ	R	Diode	AB
D1750	RH-DX0407CEZZ	R	Diode	AD
D1751	RH-EX1329CEZZ	R	Zener Diode	AD
D1755	RH-DX0475CEZZ	R	Diode	AB
D1756	RH-EX0619GEZZ	R	Zener Diode	AA
⚠ IC701	RH-FX0008GEZZ	R	PC123FY8	AE
⚠ IC702	RH-FX0008GEZZ	R	PC123FY8	AE
⚠ IC1701	RH-FX0008GEZZ	R	PC123FY8	AE
	PACKAGED CIRCUITS			
PR700	RMPTP0085CEZZ	R	Packaged Circuit	AL
	COILS AND TRANSFORMERS			
⚠ L701	RCiLF0346CEZZ	R	Coil	AL
L751	RCiLP0268CEZZ	R	Coil	AE
L1640	RCiLZ0982CEZZ	R	Coil	AK
L1641	RCiLZ1026CEZZ	R	Coil	AK
L1670	RCiLZ1005CEZZ	R	Coil	AH
L1681	VP-XF8R2K0000	R	Peaking 8.2µH	AB
⚠ T700	RTRNZ0202PEZZ		Transformer	
⚠ T1602	RTRNF0203PEZZ		H-VOLT Transformer	
⚠ T1620	RTRNZ0057PEZZ	R	Transformer	AK
⚠ T1700	RTRNZ0190PEZZ	R	Transformer	AH
	CONTROLS			
R1759	RVR-M4634GEZZ	R	220k, SUB-CONT.	AB
	CAPACITORS			
C701	VCFYSB2EB224K	R	0.22 250V M.Polypro	AD
C702	RC-FZ086CGEZZ	R	0.47 AC250V M.Polypro	AF
C703	RC-FZ016SCEZZ	R	0.1 AC250V M.Polypro	AE
C704	RC-KZ0029CEZZ	R	0.01 AC250V Ceramic	AC
C705	RC-KZ0029CEZZ	R	0.01 AC250V Ceramic	AC
C706	RC-KZ0029CEZZ	R	0.01 AC250V Ceramic	AC
C707	RC-KZ0029CEZZ	R	0.01 AC250V Ceramic	AC
C708	VCQYTA1HM332J	R	3300p 50V Mylar	AA
C709	VCKYPA1HB102K	R	1000p 50V Ceramic	AA
C710	VCKYPA1HB101K	R	100p 50V Ceramic	AA
C711	VCFYFA1HA105J	R	1 50V M.Polypro	AE
C712	VCQPSC2JA333K	R	0.033 630V Mylar	AB
C713	RC-KZ0006TAZZ	R	270p 2kV Ceramic	AB
C714	RC-KZ0006TAZZ	R	270p 2kV Ceramic	AB
C715	RC-EZ0689CEZZ	R	680 400V Electrolytic	BA
C716	VCQYTA1HM102J	R	1000p 50V Mylar	AA
C717	VCEA0A1EW476M	R	47 25V Electrolytic	AB
⚠ C719	RC-KZ016SCEZZ	R	470p 4kV Ceramic	AD
C720	VCQYTA1HM681J	R	680p 50V Mylar	AB
C721	VCKYPA1HB102K	R	1000p 50V Ceramic	AA
C727	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C728	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C732	VCKYPA1HB221K	R	220p 50V Ceramic	AA
C750	RC-KZ1040CEZZ		47p 1kV Ceramic	
C751	VCKYPA2HB471K	R	470p 500V Ceramic	AA
C752	VCKYPA2HB471K	R	470p 500V Ceramic	AA
C753	VCKYPA2HB471K	R	470p 500V Ceramic	AA

Ref. No.	Part No.	★	Description			Code
PWB-B	**DUNTKA123FMW6 POWER UNIT (Continued)**					
C754	RC-KZ1040CEZZ		47p	1kV	Ceramic	
C755	RC-EZ0004PEZZ	R	2200	35V	Electrolytic	AH
C756	RC-EZ1226CEZZ	R	3300	16V	Electrolytic	AK
C757	RC-EZ1100CEZZ	R	1000	25V	Electrolytic	AF
C758	RC-EZ0308CEZZ	R	330	160V	Electrolytic	AF
C760	RC-EZ0308CEZZ	R	330	160V	Electrolytic	AF
C761	VCQYTA1HM104J	R	0.1	50V	Mylar	AA
C763	RC-EZ0308CEZZ	R	330	160V	Electrolytic	AF
C764	VCKYPA2HB102K	R	1000p	500V	Ceramic	AA
C765	VCKYPA1HB101K	R	100p	50V	Ceramic	AA
C767	VCEA0A2AW475M	R	4.7	100V	Electrolytic	AB
C768	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C771	VCKYPA2HB221K	R	220p	500V	Ceramic	AA
C1512	VCQYTA1HM563J	R	0.056	50V	Mylar	AB
C1513	VCKYPA2HB391K	R	390p	500V	Ceramic	AA
C1514	VCQYTA1HM392J	R	3900p	50V	Mylar	AA
C1521	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1525	VCKYPA1HB391K	R	390p	50V	Ceramic	AA
C1526	VCKYPA1HB391K	R	390p	50V	Ceramic	AA
C1534	VCEA0A1HW107M	R	100	50V	Electrolytic	AB
C1535	VCFYAA2AA224J	R	0.22	100V	M.Polypro	AD
C1536	VCEA0A1HW474M	R	0.47	50V	Electrolytic	AB
C1537	VCEA0A1VW108M	R	1000	35V	Electrolytic	AD
C1538	VCEACA1HC105M	R	1	50V	Electrolytic	AC
C1539	VCQYTA1HM683J	R	0.068	50V	Mylar	AB
C1540	VCKYPA1HB331K	R	330p	50V	Ceramic	AA
C1542	VCEA0A1VW107M	R	100	35V	Electrolytic	AC
C1543	VCQYTA1HM102J	R	1000p	50V	Mylar	AA
C1572	VCEA0H1VW228M	R	2200	35V	Electrolytic	AH
C1575	RC-QZ0037CEZZ	R	0.01	100V	Mylar	AB
C1576	VCKYPA2HB102K	R	1000p	500V	Ceramic	AA
⚠ C1619	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1623	VCFPVC2DB474J	R	0.47	200V	M.Polypro	AE
C1625	VCKYPA2HB561K	R	560p	500V	Ceramic	AA
C1627	VCKYPA1HB102K	R	1000p	50V	Ceramic	AA
C1628	VCQYTA2AA563K	R	0.056	100V	Mylar	AB
⚠ C1632	VCFPVC3CA822H	R	8200p	1.6kV	M.Polypro	AE
⚠ C1633	VCFPVC3CA822H	R	8200p	1.6kV	M.Polypro	AE
⚠ C1635	VCQPPC2JB223J	R	0.022	630V	Mylar	AC
⚠ C1636	VCQPPC2JB223J	R	0.022	630V	Mylar	AC
C1638	VCKYPA1HB472K	R	4700p	50V	Ceramic	AA
C1639	RC-KZ0033CEZZ	R	150p	2kV	Ceramic	AB
C1644	RC-FZ0364CEZZ	R	0.62	250V	M.Polypro	AF
C1651	VCKYPA2HB102K	R	1000p	500V	Ceramic	AA
C1652	VCEA0A2EW336M	R	33	250V	Electrolytic	AF
C1655	VCCSPA2HL221K	R	220p	500V	Ceramic	AB
C1659	VCEA0A1HW106M	R	10	50V	Electrolytic	AB
C1670	RC-FZ0377CEZZ	R	4.7	100V	M.Polypro	AF
C1684	VCEA0A1VW106M	R	10	35V	Electrolytic	AB
C1700	VCEA0A2GW225M	R	2.2	400V	Electrolytic	AD
C1701	RC-KZ1038CEZZ		47p	1kV	Ceramic	
C1702	VCQYTA1HM104J	R	0.1	50V	Mylar	AA
⚠ C1703	RC-KZ016SCEZZ	R	470p	1kV	Ceramic	AD
C1704	RC-KZ0029CEZZ	R	0.01	AC250V	Ceramic	AC
C1705	RC-KZ0029CEZZ	R	0.01	AC250V	Ceramic	AC
C1706	RC-KZ0029CEZZ	R	0.01	AC250V	Ceramic	AC
C1707	RC-KZ0029CEZZ	R	0.01	AC250V	Ceramic	AC
C1750	VCKYPA2HB221K	R	220p	500V	Ceramic	AA
C1751	VCEA0A1CW477M	R	470	16V	Electrolytic	AC
C1753	VCEA0A1HW106M	R	10	50V	Electrolytic	AB
	RESISTORS					
R701	VRD-RM2HD391J	R	390	1/2W	Carbon	AA
R702	VRW-KQ41C1R0K	R	1	15W	Cement	AF
R703	VRW-KQ41C1R0K	R	1	15W	Cement	AF
R704	VRW-KQ41C1R0K	R	1	15W	Cement	AF
⚠ R705	VRC-UA2HG825K	R	8.2M	1/2W	Solid	AA
⚠ R706	VRC-UA2HG825K	R	8.2M	1/2W	Solid	AA
R707	VRD-RA2BE563J	R	56k	1/8W	Carbon	AA
R708	VRD-RA2BE822J	R	8.2k	1/8W	Carbon	AA
R709	VRD-RM2HD224J	R	220k	1/2W	Carbon	AA
R710	VRD-RM2HD224J	R	220k	1/2W	Carbon	AA

Ref. No.	Part No.	★	Description			Code
R711	VRD-RA2BE153J	R	15k	1/8W	Carbon	AA
R712	VRD-RM2HD155J	R	1.5M	1/2W	Carbon	AB
R713	VRD-RM2HD155J	R	1.5M	1/2W	Carbon	AB
R714	VRD-RA2BE150J	R	15	1/8W	Carbon	AA
R715	VRD-RA2BE680J	R	68	1/8W	Carbon	AA
R716	VRD-RA2BE393J	R	39k	1/8W	Carbon	AA
R717	VRS-KT3LB823J	R	82k	3W	Metal Oxide	AC
R718	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R720	VRD-RM2HD105J	R	1M	1/2W	Carbon	AA
R721	VRD-RM2HD123J	R	12k	1/2W	Carbon	AA
R723	VRD-RM2HD102J	R	1k	1/2W	Carbon	AA
R725	VRD-RM2HD124J	R	120k	1/2W	Carbon	AA
R726	VRD-RM2HD124J	R	120k	1/2W	Carbon	AA
R750	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R751	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R752	VRD-RA2BE273J	R	27k	1/8W	Carbon	AA
R753	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R754	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R755	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R756	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R757	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R758	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R759	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R761	VRD-RA2BE332J	R	3.3k	1/8W	Carbon	AA
R762	VRD-RA2BE562J	R	5.6k	1/8W	Carbon	AA
R763	VRD-RA2BE153J	R	15k	1/8W	Carbon	AA
R1508	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
⚠ R1522	VRG-RL2HB220J	R	22	1/2W	Fuse Resistor	AB
R1523	VRD-RA2BE124J	R	120k	1/8W	Carbon	AA
R1524	VRD-RA2BE473J	R	47k	1/8W	Carbon	AA
R1531	VRN-SV2HB2R7J	R	2.7	1/2W	Metal Film	AA
R1532	VRN-SV2HB2R7J	R	2.7	1/2W	Metal Film	AA
R1533	VRN-SV2HB2R7J	R	2.7	1/2W	Metal Film	AA
R1534	VRD-RA2BE151J	R	150	1/8W	Carbon	AA
R1535	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1538	VRD-RM2HD123J	R	12k	1/2W	Carbon	AA
R1539	VRD-RA2BE223J	R	22k	1/8W	Carbon	AA
R1540	VRD-RA2BE274J	R	270k	1/8W	Carbon	AA
R1541	VRS-VV3AB391J	R	390	1W	Metal Oxide	AA
R1542	VRD-RA2BE563J	R	56k	1/8W	Carbon	AA
R1543	VRD-RA2BE561J	R	560	1/8W	Carbon	AA
R1545	VRS-VV3AB103J	R	10k	1W	Metal Oxide	AA
R1556	VRD-RA2BE393J	R	39k	1/8W	Carbon	AA
R1557	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R1558	VRD-RA2BE223J	R	22k	1/8W	Carbon	AA
R1559	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R1576	VRN-VV3AB2R2J	R	2.2	1W	Metal Film	AA
R1617	VRD-RA2BE153J	R	15k	1/8W	Carbon	AA
R1618	VRD-RA2BE153J	R	15k	1/8W	Carbon	AA
⚠ R1619	VRD-RA2BE472J	R	4.7k	1/8W	Carbon	AA
⚠ R1620	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
R1621	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R1622	VRS-SU2HB102J	R	1k	1/2W	Metal Oxide	AA
R1623	VRD-RM2HD393J	R	39k	1/2W	Carbon	AA
R1624	VRS-KT3LB122J	R	1.2k	3W	Metal Oxide	AC
R1625	VRS-VV3AB562J	R	5.6k	1W	Metal Oxide	AA
R1626	VRD-RA2BE561J	R	560	1/8W	Carbon	AA
R1627	VRD-RA2BE681J	R	680	1/8W	Carbon	AA
R1629	VRW-KQ41C4R7K	R	4.7	15W	Cement	AF
R1631	VRS-KT3LB122J	R	1.2k	3W	Metal Oxide	AC
R1638	VRD-RM2HD150J	R	15	1/2W	Carbon	AA
R1647	VRS-KT3LB122J	R	1.2k	3W	Metal Oxide	AC
⚠ R1651	RR-XZ0029CEZZ	R	3.3	1/2W	Fuse Resistor	AB
R1654	VRD-RM2HD102J	R	1k	1/2W	Carbon	AA
R1655	VRD-RM2HD472J	R	4.7k	1/2W	Carbon	AA
R1659	VRN-VV3DBR10J	R	0.1	2W	Metal Film	AB
R1660	VRD-RM2HD101J	R	100	1/2W	Carbon	AA
R1661	VRD-RM2HD101J	R	100	1/2W	Carbon	AA
R1662	VRD-RM2HD103J	R	10k	1/2W	Carbon	AA
R1669	VRD-RA2BE224J	R	220k	1/8W	Carbon	AA
R1670	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R1671	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R1672	VRD-RA2BE472J	R	4.7k	1/8W	Carbon	AA
R1673	VRD-RA2EE822J	R	8.2k	1/4W	Carbon	AA
R1674	VRD-RM2HD182J	R	1.8k	1/2W	Carbon	AA
R1675	VRN-VV3DBR33J	R	0.33	2W	Metal Film	AA

Ref. No.	Part No.	★	Description			Code
PWB-B	**DUNTKA123FMW6 POWER UNIT (Continued)**					
R1700	VRW-KP3HC330J	R	33	5W	Cement	AD
R1752	VRD-RA2BE102J	R	1k	1/8W	Carbon	AA
R1753	VRS-VV3DB153J	R	15k	2W	Metal Oxide	AA
R1754	VRD-RA2EE185J	R	1.8M	1/4W	Carbon	AA
R1755	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R1756	VRD-RA2EE334J	R	330k	1/4W	Carbon	AA
R1757	VRS-VV3AB103J	R	10k	1W	Metal Oxide	AA
R1760	VRD-RA2EE104J	R	100k	1/4W	Carbon	AA
R1761	VRD-RA2EE124J	R	120k	1/4W	Carbon	AA
	MISCELLANEOUS PARTS					
FB700	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB701	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB702	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB703	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB750	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB751	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB752	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB753	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB754	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB755	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB756	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB757	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB1500	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB1630	RBLN-0047CEZZ	R	Ferrite Bead			AB
FB1631	RBLN-0047CEZZ	R	Ferrite Bead			AB
FB1700	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB1750	RBLN-0037CEZZ	R	Ferrite Bead			AB
P700	QPLGN0360CEZZ	R	Plug, 3pin(AC)			AC
P701	QPLGN0260CEZZ	R	Plug, 2pin(G)			AC
P750	QPLGZ1040CEZZ	R	Plug, 10pin(XB)			AE
P1500	QPLGN0160FJZZ	R	Plug, 5pin(K)			AD
P1501	QPLGZ1040CEZZ	R	Plug, 10pin(XD)			AE
P1530	QPLGN0261CEZZ	R	Plug, 2pin(G4)			AB
P1650	QPLGN0741CEZZ	R	Plug, 7pin(H)			AC
P1750	QPLGZ1040CEZZ	R	Plug, 10pin(XA)			AE
RDA700	PRDAR0304PEFW	R	Heat Sink for Q700			AH
RDA701	PRDAR0139PEFW	R	Heat Sink for D700			AC
RDA750	PRDAR0160PEFW	R	Heat Sink for D754			AF
RDA1501	PRDAR0213PEFW	R	Heat Sink for IC1501			AM
⚠ RDA1630	PRDAR0249PEFW	R	Heat Sink for Q1630			AL
RDA1631	PRDAR0198PEFW	R	Heat Sink for D1631			AG
RDA1671	PRDAR0277PEFW	R	Heat Sink for Q1671			AF
⚠ RY700	RRLYJ0093CEZZ	R	Relay			AG
	PZETM0016CEZZ	R	Insulator			AB
	QCNW-2428PEZZ	R	Connecting Cord (J1)			AC
	MSPRK0034BMFW	R	Spring			AC
	LHLDW1064PEKZ	R	Holder			AC
PWB-C	**DUNTKA075FMX3 CRT UNIT**					
	INTEGRATED CIRCUITS					
IC850	VHiTDA6103Q-1	R	TDA6103Q/N3			AL
	TRANSISTORS					
Q850	VS2SA1266-Y-1	R	2SA1266-Y			AA
Q851	VS2SC3198-Y-1	R	2SC3198-Y			AA
Q1504	VS2SC3198-Y-1	R	2SC3198-Y			AA
Q1505	VS2SA1266-Y-1	R	2SA1266-Y			AA
Q1506	VS2SA1964E/-1	R	2SA1964E			AF
Q1507	VS2SC5248E/-1	R	2SC5248E			AE
	DIODES AND LED'S					
D850	RH-DX0220CEZZ	R	Diode			AB
D851	RH-DX0220CEZZ	R	Diode			AB
D852	RH-DX0220CEZZ	R	Diode			AB
D853	RH-EX0647GEZZ	R	Zener Diode			AA
D854	RH-DX0475CEZZ	R	Diode			AB
D855	RH-DX0475CEZZ	R	Diode			AB
D860	RH-DX0475CEZZ	R	Diode			AB
D1502	RH-DX0475CEZZ	R	Diode			AB
D1503	RH-DX0475CEZZ	R	Diode			AB
D1506	RH-DX0487CEZZ	R	Diode			AC
D1507	RH-DX0487CEZZ	R	Diode			AC
D1508	RH-DX0475CEZZ	R	Diode			AB
	CAPACITORS					
C850	VCFYSB2EB823J	R	0.082	250V	Mylar	AD
C851	RC-KZ018JCEZZ	R	0.01	3kV	Ceramic	AC
C852	VCEA0A1CW106M	R	10	16V	Electrolytic	AB
C853	VCFYFA1HA224J	R	0.22	50V	Mylar	AB
C854	VCEA0A1AW227M	R	220	10V	Electrolytic	AB
C855	VCEA0A2EW106M	R	10	250V	Electrolytic	AD
C856	VCEA0A1CW226M	R	22	16V	Electrolytic	AB
C1501	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C1506	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1508	VCKYPA2HB472K	R	4700p	500V	Ceramic	AB
C1509	VCKYPA2HB472K	R	4700p	500V	Ceramic	AB
C1510	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1511	VCKYPA1HF103Z	R	0.01	50V	Ceramic	AA
C1515	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C1516	VCEA0A1CW476M	R	47	16V	Electrolytic	AB
C1517	VCEA0A2AW106M	R	10	100V	Electrolytic	AC
C1518	VCCSPA2HL560K	R	56p	500V	Ceramic	AA
C1519	VCEA4A2CN106M	R	10	160V	Electrolytic	AC
	RESISTORS					
R850	VRD-RA2BE152J	R	1.5k	1/8W	Carbon	AA
R851	VRD-RA2BE152J	R	1.5k	1/8W	Carbon	AA
R852	VRD-RA2BE152J	R	1.5k	1/8W	Carbon	AA
R853	VRD-RA2BE272J	R	2.7k	1/8W	Carbon	AA
R854	VRD-RA2BE272J	R	2.7k	1/8W	Carbon	AA
R855	VRD-RA2BE272J	R	2.7k	1/8W	Carbon	AA
R856	VRD-RM2HD154J	R	150k	1/2W	Carbon	AA
R857	VRD-RM2HD154J	R	150k	1/2W	Carbon	AA
R858	VRD-RM2HD154J	R	150k	1/2W	Carbon	AA
R862	VRC-MA2HG152K	R	1.5k	1/2W	Solid	AA
R863	VRC-MA2HG152K	R	1.5k	1/2W	Solid	AA
R864	VRC-MA2HG152K	R	1.5k	1/2W	Solid	AA
R868	VRD-RA2BE272J	R	2.7k	1/8W	Carbon	AA
R869	VRD-RA2BE472J	R	4.7k	1/8W	Carbon	AA
R870	VRD-RA2BE223J	R	22k	1/8W	Carbon	AA
R871	VRD-RA2BE223J	R	22k	1/8W	Carbon	AA
R872	VRD-RA2EE680J	R	68	1/4W	Carbon	AA
R873	VRD-RM2HD224J	R	220k	1/2W	Carbon	AA
R874	VRD-RM2HD154J	R	150k	1/2W	Carbon	AA
R875	VRD-RM2HD154J	R	150k	1/2W	Carbon	AA
R876	VRD-RM2HD154J	R	150k	1/2W	Carbon	AA
R877	VRD-RA2BE103J	R	10k	1/8W	Carbon	AA
R880	VRD-RM2HD332J	R	3.3k	1/2W	Carbon	AA
R1511	VRD-RA2BE101J	R	100	1/8W	Carbon	AB
⚠ R1513	VRS-VV3AB471J	R	470	1W	Metal Oxide	AA
R1514	VRD-RA2BE100J	R	10	1/8W	Carbon	AA
R1515	VRD-RA2BE820J	R	82	1/8W	Carbon	AA
R1516	VRD-RA2BE820J	R	82	1/8W	Carbon	AA
R1517	VRD-RA2BE122J	R	1.2k	1/8W	Carbon	AA
R1518	VRD-RA2BE683J	R	68k	1/8W	Carbon	AA
R1519	VRD-RA2BE123J	R	12k	1/8W	Carbon	AA
R1520	VRD-RA2BE683J	R	68k	1/8W	Carbon	AA
R1521	VRD-RA2BE122J	R	1.2k	1/8W	Carbon	AA
R1525	VRD-RA2EE560J	R	56	1/4W	Carbon	AA
R1526	VRD-RA2EE560J	R	56	1/4W	Carbon	AA
R1527	VRD-RM2HD1R5J	R	1.5	1/2W	Carbon	AA
R1528	VRD-RM2HD1R5J	R	1.5	1/2W	Carbon	AA
⚠ R1529	VRS-VV3DB221J	R	220	2W	Metal Oxide	AA
R1530	VRD-RA2BE222J	R	2.2k	1/8W	Carbon	AA
	MISCELLANEOUS PARTS					
FB850	RBLN-0037CEZZ	R	Ferrite Bead			AB
FB1501	RBLN-0020CEZZ	R	Ferrite Bead			AB
P852	QPLGN0241CEZZ	R	Plug, 2pin(PU)			AA
P854	QPLGN0741CEZZ	R	Plug, 7pin(H)			AC
P858	QTiPM0083CEZZ	R	Tip			AB
P860	QPLGN0841CEZZ	R	Plug, 8pin(KY)			AB

Ref. No.	Part No.	★	Description	Code
PWB-C	**DUNTKA075FMX3 CRT UNIT (Continued)**			
RDA850	PRDAR0248PEFW	R	Heat Sink for Q1506	AF
RDA1506	PRDAR0083PEFW	R	Heat Sink for Q1507	AD
RDA1507	PRDAR0083PEFW	R	Heat Sink for IC850	AD
SC850	QSOCV1012CEZZ	R	Socket	AH
SC851	QSOCZ0003CEZZ	R	Socket	AD
PWB-D	**DUNTKA429WEV0 OPERATION UNIT**			
	TRANSISTORS			
Q1200	VS2SC3198-Y-1	R	2SC3198-Y	AA
Q1201	VS2SC3198-Y-1	R	2SC3198-Y	AA
Q1202	VS2SA1266-Y-1	R	2SA1266-Y	AA
Q1203	VS2SA1266-Y-1	R	2SA1266-Y	AA
Q1205	VS2SA1266-Y-1	R	2SA1266-Y	AA
	DIODES AND LED'S			
D1200	RH-PX0414CEZZ	R	PhotoDiode	AE
D1201	RH-PX0274CEZZ	R	PhotoDiode	AC
D1202	RH-PX0274CEZZ	R	PhotoDiode	AC
	PACKAGED CIRCUITS			
VA3700	RH-VX0048CEZZ	R	Varistor	AE
	COILS			
L3700	RCiLF0363CEZZ	R	Coil	AG
	CAPACITORS			
C1200	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1201	VCEA0A0JW107M	R	100 6.3V Electrolytic	AB
C1202	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C1204	VCKYPA1HB102K	R	1000p 50V Ceramic	AA
C1205	VCKYPA1HB102K	R	1000p 50V Ceramic	AA
C1207	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA
C3700	RC-FZ012SGEZZ	R	0.22 AC250V M.Polypro	AE
	RESISTORS			
R1200	VRD-RA2BE471J	R	470 1/8W Carbon	AA
R1201	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R1202	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R1203	VRD-RA2BE152J	R	1.5k 1/8W Carbon	AA
R1204	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R1205	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R1206	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R1207	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R1208	VRD-RA2BE821J	R	820 1/8W Carbon	AA
R1209	VRD-RA2BE473J	R	47k 1/8W Carbon	AA
R1210	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R1211	VRD-RA2BE821J	R	820 1/8W Carbon	AA
R1212	VRD-RA2BE103J	R	10k 1/8W Carbon	AA
R1213	VRD-RA2BE101J	R	100 1/8W Carbon	AB
R1214	VRD-RA2BE101J	R	100 1/8W Carbon	AB
R1218	VRD-RA2BE562J	R	5.6k 1/8W Carbon	AA
R1219	VRD-RA2BE101J	R	100 1/8W Carbon	AB
R1220	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1221	VRD-RA2BE101J	R	100 1/8W Carbon	AB
R1222	VRD-RA2BE222J	R	2.2k 1/8W Carbon	AA
R1223	VRD-RA2BE472J	R	4.7k 1/8W Carbon	AA
R1224	VRD-RA2BE822J	R	8.2k 1/8W Carbon	AA
R1225	VRD-RA2BE273J	R	27k 1/8W Carbon	AA
R1227	VRD-RA2BE273J	R	27k 1/8W Carbon	AA
R1228	VRD-RA2BE101J	R	100 1/8W Carbon	AB
R1229	VRD-RA2BE223J	R	22k 1/8W Carbon	AA
R1230	VRD-RA2BE151J	R	150 1/8W Carbon	AA
R1231	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1232	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1233	VRD-RA2BE102J	R	1k 1/8W Carbon	AA
R1250	VRD-RA2BE101J	R	100 1/8W Carbon	AB

Ref. No.	Part No.	★	Description	Code
	SWITCHES			
S1200	QSW-K0003AJZZ	R	Switch, CH UP	AB
S1201	QSW-K0003AJZZ	R	Switch, CH DOWN	AB
S1202	QSW-K0003AJZZ	R	Switch, VOLUME UP	AB
S1203	QSW-K0003AJZZ	R	Switch, VOLUME DOWN	AB
S1204	QSW-K0003AJZZ	R	Switch, PRESET	AB
S3700	QSW-P0591CEZZ	R	Switch	AQ
	MISCELLANEOUS PARTS			
F3700	QFS-C5022CEZZ	R	Fuse, T5A/250V	AD
FH3700	QFSHD1013CEZZ	R	Fuse Holder	AC
FH3701	QFSHD1014CEZZ	R	Fuse Holder	AC
J1200	QTANJ0335CEZZ	R	Terminal	AG
J1201	QJAKJ0047CEZZ	R	Jack	AD
P3700	QPLGN0360CEZZ	R	Plug, 3pin(AC)	AC
P3701	QPLGN0269GEZZ	R	Plug, 2pin(A)	AB
RMC1200	RRMCU0235CEZZ	R	Remote Receiver	AK
SC1200	QSOCN1895REZZ	R	Socket, 18pin(RC)	AC

MISCELLANEOUS PARTS

⚠	QACCZ3008PEZZ	R	AC Cord	AN
SP1	VSP1206PB526A		Speaker	
SP2	VSP1206PB526A		Speaker	
	QACCZ3008PEZZ	R	AC Cord	AN
	QCNW-0032KJZZ		Connecting Cord(SS)	
	QCNW-0033KJZZ		Connecting Cord(RC)	
	QCNW-0034KJZZ		Connecting Cord(AC)	
	QCNW-0035KJZZ		Connecting Cord(KY)	
	QCNW-0036KJZZ		Connecting Cord(H)	
	QCNW-2543PEZZ	R	Connecting Cord(G4)	AC
	TLABM0135KJZZ		Model Label	
	TLABN0148CEZZ		No. Card	
	TLABV0095KJZZ		Bar Code Label	
	TLABZ0095KJZZ		Case Label	

SUPPLIED ACCESSORIES

RRMCG1603PESA	Infrared Remote Control Unit
TiNS-0129KJZZ	Operation Manual
TMAPC0095KJZZ	Service Map

PACKING PARTS

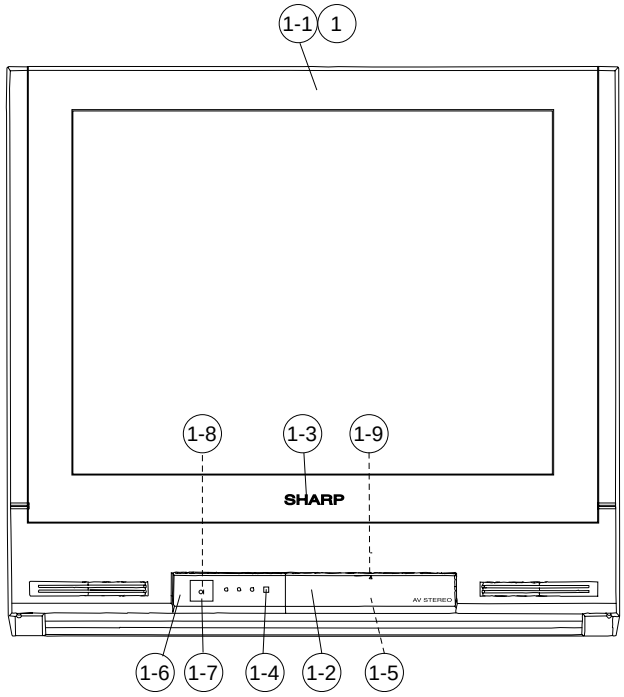
(NOT REPLACEMENT ITEM)

SPAKC0119KJZZ	-	Packing Case	—
SPAKP0003KJZZ	-	Wrapping Paper	—
SPAKX0081KJZZ	-	Buffer Material (Top)	—
SPAKX0084KJZZ	-	Buffer Material (Bottom)	—

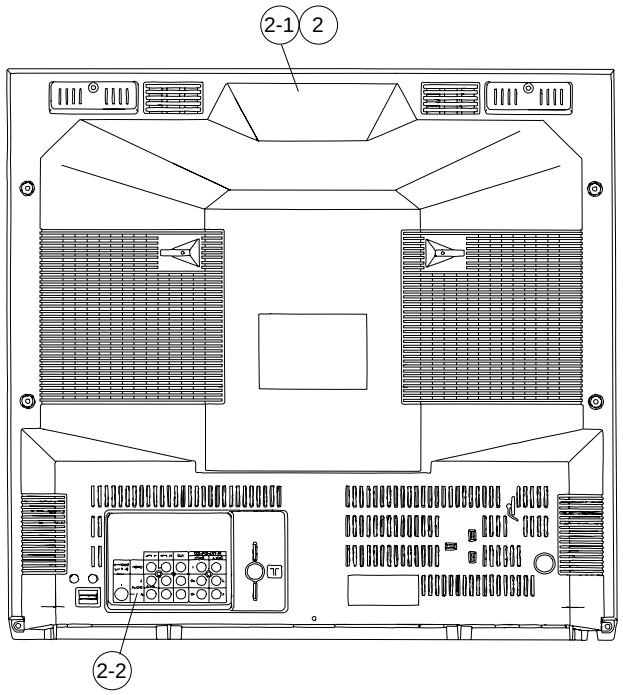
Ref. No.	Part No.	★	Description	Code
1	CCABA0091WEA0		Front Cabinet Ass'y	
1-1	*Not Available*	-	Front Cabinet	—
1-2	GDORF0021KJSA		Door	
1-3	HBDGB3141CESA	R	SHARP Badge	AG
1-4	HDECQ0042KJSA		LED, R/C Cover	
1-5	HiNDP0026KJSA		Indication Plate (In Door)	
1-6	HPNLC0001KJSA		Control Panel	
1-7	JBTN-0048KJSA		Power Button	
1-8	MSPRC0002KJFW		Spring, Power Button	
1-9	PKAi-0007PE00	R	Door Latch	AE
2	CCABB0058WEA0		Rear Cabinet Ass'y	
2-1	*Not Available*	-	Rear Cabinet	—
2-2	HiNDP0265PEZZ	R	Rear AV Jack Indication Plate	AF

CABINET PARTS

CABINET PARTS LOCATION

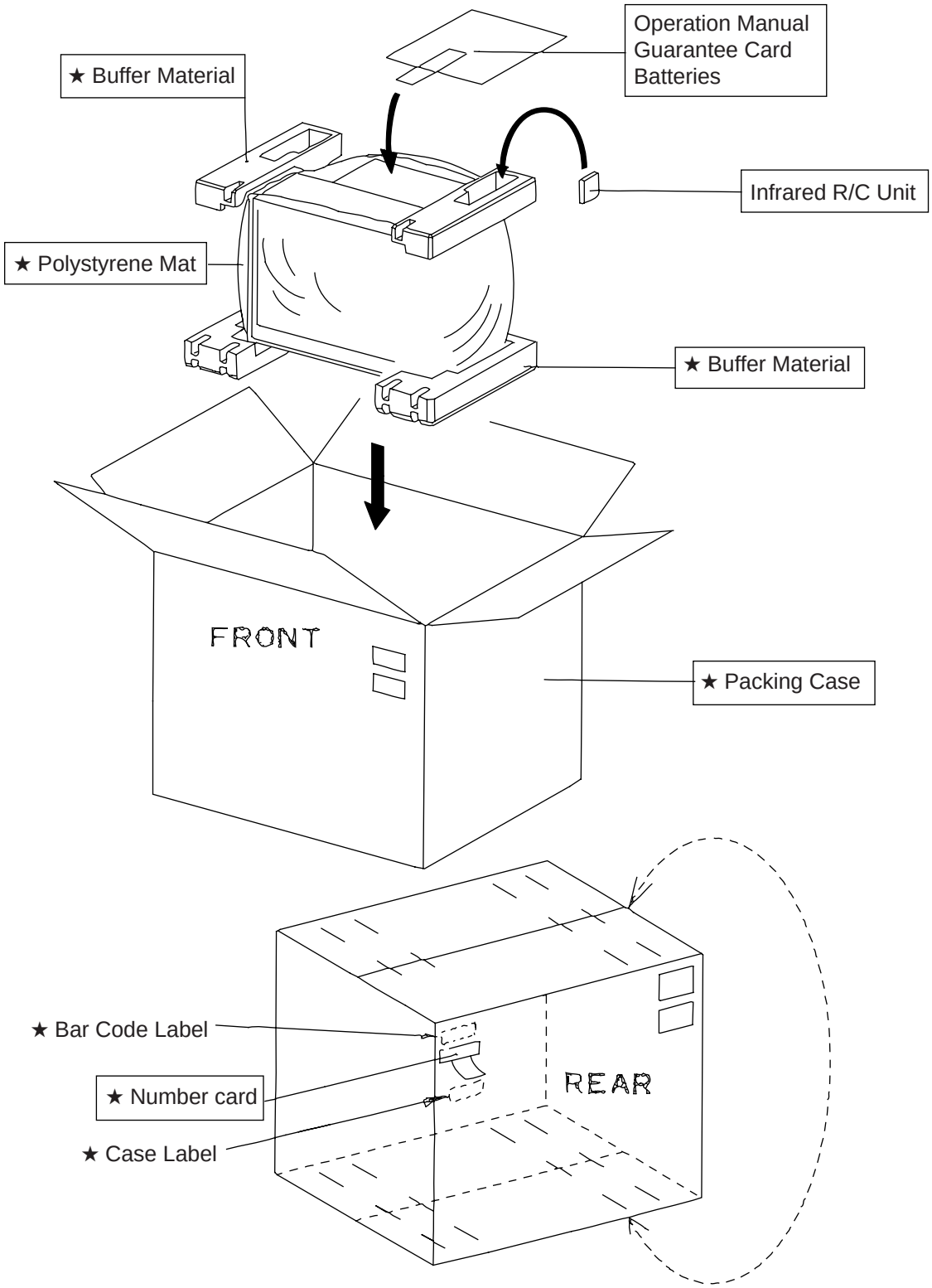


FRONT VIEW



REAR VIEW

PACKING OF THE SET



MARK ★: Not Replacement Items

ⒹSEM ⓅSREC TQ1083-S
Jan. 2001 Printed in Japan
NA. KY

SHARP CORPORATION
AV Systems Group
Quality & Reliability Control Center
Yaita, Tochigi 329-2193, Japan

Other ManualsLib Projects

www.manualslib.com

www.manualslib.de

www.manualslib.es

www.manualslib.fr

www.manualslib.nl

www.manualslib.mx

www.manualslib.tech 30+ Languages